

# Job Costing Report

Dart Aerospace Ltd.  
Hawkesbury

Nov 08, 2005  
12:25 pm

Work Order No	: 0024591	Department Code:	
Project Name	: D350-689-011	Burden Flags	: NNNNNNNN
Project For	: WK546	WO Status	: Open
Work Order Type	: Main	Invoice State	: Not Invoiced
Main WO Number	:	Invoice Date	:
House Part Number	: *D350-689-011	Invoice Number	:
Description	: Dual High Back Seat Inst	Invoice Amount	: 0.00
Manufactured	: Yes		
Amount Req'd	: 1	Order Entry No	:
Amount Done	: 0	OE Value	: 0.00
Start Date	: 10-18-05		
Est Finish Date	: 11-20-05	Est Margin	: 0.000%
Act Finish Date	:	Actual Margin	: 0.000%
Drawings Req'd	: No		
Ok for Approval	:		
Approval Rec'd	:	\$0 Posted to Finished Goods	

	Estimated	Actual	Var. %	Posted	To Post
=====	=====	=====	=====	=====	=====
Material Cost	: 0.00	0.00	0.00	0.00	0.00
Engineering Hours	: 0.00	0.00	0.00		
Engineering Cost	: 0.00	0.00	0.00	0.00	0.00
Production Hours	: 0.00	0.00	0.00		
Production Cost	: 0.00	0.00	0.00	0.00	0.00
Packaging Hours	: 0.00	0.00	0.00		
Packaging Cost	: 0.00	0.00	0.00	0.00	0.00
OverHead Hours	: 0.00	0.00	0.00		
OverHead Cost	: 0.00	0.00	0.00	0.00	0.00
CNC Hours	: 0.00	0.00	0.00		
CNC	: 0.00	0.00	0.00	0.00	0.00
Misc. Hours	: 0.00	0.00	0.00		
Misc.	: 0.00	0.00	0.00	0.00	0.00
=====	=====	=====	=====		
Burden	: 0.00	0.00	0.00		
=====	=====	=====	=====		
Total Cost	: 0.00	0.00	0.00		
Margin	: 0.000	0.000			
Selling Cost	: 0.00	0.00			

	Estimated	Actual
Labour Hrs/Amount Done	: 0.00	0.00
Profits/(Loss)	: 0.00	0.00

Date: Thursday, 11/24/2005 7:50:40 AM  
 User: Linda Lacelle

## Process Sheet

<b>Customer</b> :	CU-DAR001 Dart Helicopters Services	<b>Drawing Name</b> :	DUAL HIGH BACK SEAT
<b>Job Number</b> :	24591		
<b>Estimate Number</b> :	10871		
<b>P.O. Number</b> :		<b>Part Number</b> :	D350689011
<b>This Issue</b> :	11/24/2005	<b>S.O. No.</b> :	
<b>Prsht Rev.</b> :	NC	<b>Drawing Number</b> :	N/A
<b>First Issue</b> :	//	<b>Project Number</b> :	N/A
<b>Previous Run</b> :		<b>Drawing Revision</b> :	N/A
	<b>Type</b> :	<b>Material</b> :	N/A
	SMALL /MED FAB	<b>Due Date</b> :	12/20/2005
<b>Written By</b> :		<b>Qty:</b>	1
<b>Checked &amp; Approved By</b> :		<b>Um:</b>	Each
<b>Comment</b> :	Est Rev:B 03.05.09 Reformat; Modify Step 1 KJ/RF		

## Additional Product

Job Number:



<b>Seq. #:</b>	<b>Machine Or Operation:</b>	<b>Description :</b>
----------------	------------------------------	----------------------

1.0	DC	DOCUMENT CONTROL
-----	----	------------------

**Comment:** DOCUMENT CONTROL

Photocopy bluefile and create labels per PPP D350-689-011 CHG002

2.0	PACKAGING 1	PACKAGING RESOURCE #1
-----	-------------	-----------------------

**Comment:** PACKAGING RESOURCE #1

Pick Packing Kit

3.0	D30181	Seat Cushion
-----	--------	--------------

4.0	D30191	Back cushion
-----	--------	--------------

5.0	D350689013	Floor Provisions Kit
-----	------------	----------------------

6.0	D350689041	DUAL SEAT ASS'Y
-----	------------	-----------------

7.0	QC4	INSPECT 100% KITS FOR COMPLETENESS
-----	-----	------------------------------------

**Comment:** INSPECT 100% KITS FOR COMPLETENESS

8.0	PACKAGING 1	PACKAGING RESOURCE #1
-----	-------------	-----------------------

**Comment:** PACKAGING RESOURCE #1

Identify and pack for shipping as per PPP D350-689-011

Location: \_\_\_\_\_

PPP Rev: \_\_\_\_\_

9.0	DC	DOCUMENT CONTROL
-----	----	------------------

**Comment:** DOCUMENT CONTROL

Inspection Level 21

5/4/02

**DART AEROSPACE LTD**

Work Order: *(2459) 1055*  
*24591*

**Description:** Floor Provisions Kit

**Part Number:** D350-689-013

**Dwg:** D3025 Rev. A1; D3026 Rev. *B* A; D3027 Rev. *A.B*

**Qty:** 1 Kits

D3032 Rev. A; D3033 Rev. A1 *(Plumbing)*

Page 1 of 3

Step	Location	Procedure	By	Date	Qty
1	DC	Issue Traveler <b>Note: D350-689-013 Kit to be made in multiples of 8. Each Kit consists of (1) D3025-1, (1) D3026-1, (1) D3027-1, (1) D3027-3, (1) D3027-5, (4) D3027-7, (1) D3032-1, (1) D3033-1, (1) D3033-3</b>	<i>DA</i>	<i>05.10.18</i>	<i>1</i>
2	DC	Photocopy bluefile and create labels per PPP D350-689-013 <b>CHG001 002</b> <i>MR 44</i>	<i>DA</i>	<i>05.11.07</i>	<i>1</i>
3	MV	Cut blanks: 18.750" x 6.600" (+0.000/-0.010) Material: 2024-T3 (QQ-A-250/4) 0.050" thick (M2024T3S.050) <b>Grain along 6.600"</b> <b>Identify as D3025-1</b> Batch:			
4	MV	Cut blanks: 19.000" x 3.760" (+0.000/-0.010) Material: 2024-T3 (QQ-A-250/4) 0.050" thick (M2024T3S.050) <b>Grain along 3.760"</b> <b>Identify as D3026-1</b> Batch:			
5	MV	Cut blanks: 1.390" x 2.800" (+0.000/-0.010) Material: 2024-T3 (QQ-A-250/4) 0.063" thick (M2024T3S.063) <b>Grain along 1.390"</b> <b>Identify as D3027-1</b> Batch:			
6	MV	Cut blanks: 1.850" x 2.500" (+0.000/-0.010) Material: 2024-T3 (QQ-A-250/4) 0.050" thick (M2024T3S.050) <b>Grain along 1.850"</b> <b>Identify as D3027-3</b> Batch:			
7	MV	Cut blanks: 1.670" x 2.710" (+0.000/-0.010) Material: 2024-T3 (QQ-A-250/4) 0.050" thick (M2024T3S.050) <b>Grain along 1.670"</b> <b>Identify as D3027-5</b> Batch:			
8	MV	<b>Cut (4) D3027-7 per (1) D350-689-013 Kit</b> Cut blanks: 1.920" x 1.850" (+0.000/-0.010) Material: 2024-T3 (QQ-A-250/4) 0.050" thick (M2024T3S.050) <b>Grain along 1.920"</b> <b>Identify as D3027-7</b> Batch:			
9	MV	Machine D3025-1 as per Folio FA137 and Dwg D3025 <b>Stack of 8</b>			
10	QC2	Inspect parts as they come off the CNC machine			
11	MV	Deburr to take measurement			
12	QC8	Second check			
13	MV	Machine D3026-1 as per Folio FA138 and Dwg D3026 <b>Stack of 8</b>			
14	QC2	Inspect parts as they come off the CNC machine			
15	MV	Deburr to take measurement			
16	QC8	Second check			
17	MV	Machine D3027-1 as per Folio FA139 and Dwg D3027 <b>Stack of 8</b>			

UNDER REVIEW

RELEASED  
03.09.15 RF

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Mfg / Design Mgr	Approval QC Inspector

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Design Mgr	Approval QC Inspector
			Initial Design Mgr	Action Description Design Mgr	Sign & Date			

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

NOTE: Date & initial all entries

QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

5/46

<b>DART AEROSPACE LTD</b>	<b>Work Order:</b>	24591
<b>Description:</b> Dual High Back Seat Installation	<b>Part Number:</b>	D350-689-011
<b>Dwg:</b>	<b>Qty:</b>	1
Page 1 of 1		

Step	Location	Procedure	By	Date	Qty
1	DC	Issue Travelers for: D350-689-011 Dual High Back Seat Instln D350-689-013 Floor Provisions Kit D350-689-041 Dual High Back Seat Assy			
		Batch 24591 24591 24591			
			HJ	05.10.18	1
2	DC	Photocopy bluefile and create labels per PPP D350-689-011 CHG004 002			
		05.10.18 UK44	DT	05.10.18	1
3	KP	Pick: Packing Kit Qty Part Number Description Batch 1 D3018-1 Seat Cushion B24599 1 D3019-1 Back Cushion B24600 1 D350-689-013 Floor Provisions Kit B24591 1 D350-689-041 Dual Seat Assy B24591			
				06/02/23	1
4	QC4	Inspect Kit 100% for Completeness on the W/O			
				06/02/23	1
5	PK	Identify and pack for shipping as per PPP D350-689-011 REV. E			
				06/02/23	1
6	AC	Cost / part			
7	DC	Close W/Order and Ensure Travellers Attached Inspect Level 21 Travellers: D350-689-011 D350-689-013 D350-689-041			
				06/02/23	1

Rev	Date	Change	Revised By	Approved
A	01.05.29	New issue	EC	
B	03.05.09	Reformat; Modify Step 1	KJ/RF	

06-02-23  
RELEASED  
01/01/2023

UNDER REVIEW

OK 05.10.18

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Mfg / Design Mgr	Approval QC Inspector

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Design Mgr	Approval QC Inspector
			Initial Design Mgr	Action Description Design Mgr	Sign & Date			

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes ☐ No ☒ DQA: ☒ Date: 06/02/23

NOTE: Date & initial all entries

QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

# Job Costing Report

Dart Aerospace Ltd.  
Hawkesbury

Oct 18, 2005  
11:00 am

Work Order No	: 0024591	Department Code:	
Project Name	: D350-689-011	Burden Flags	: NNNNNNNN
Project For	: WK546	WO Status	: Open
Work Order Type	: Main	Invoice State	: Not Invoiced
Main WO Number	:	Invoice Date	:
House Part Number	: *D350-689-011	Invoice Number	:
Description	: Dual High Back Seat Inst	Invoice Amount	: 0.00
Manufactured	: Yes		
Amount Req'd	: 1	Order Entry No	:
Amount Done	: 0	OE Value	: 0.00
Start Date	: 10-18-05		
Est Finish Date	: 11-20-05	Est Mark Up	: 0.000%
Act Finish Date	:	Actual Mark Up	: 0.000%
Drawings Req'd	: No		
Ok for Approval	:		
Approval Rec'd	:	\$0 Posted to Finished Goods	

	Estimated	Actual	Var. %	Posted	To Post
Material Cost	0.00	0.00	0.00	0.00	0.00
Engineering Hours	0.00	0.00	0.00		
Engineering Cost	0.00	0.00	0.00	0.00	0.00
Production Hours	0.00	0.00	0.00		
Production Cost	0.00	0.00	0.00	0.00	0.00
Packaging Hours	0.00	0.00	0.00		
Packaging Cost	0.00	0.00	0.00	0.00	0.00
OverHead Hours	0.00	0.00	0.00		
OverHead Cost	0.00	0.00	0.00	0.00	0.00
CNC Hours	0.00	0.00	0.00		
CNC	0.00	0.00	0.00	0.00	0.00
Misc. Hours	0.00	0.00	0.00		
Misc.	0.00	0.00	0.00	0.00	0.00
Burden	0.00	0.00	0.00		
Total Cost	0.00	0.00	0.00		
Mark up	0.000	0.000			
Selling Cost	0.00	0.00			

	Estimated	Actual
Labour Hrs/Amount Done	: 0.00	0.00
Profits/(Loss)	: 0.00	0.00

<b>DART AEROSPACE LTD</b>	<b>Work Order:</b>	24591
<b>Description:</b> Floor Provisions Kit	<b>Part Number:</b>	D350-689-013
Dwg: D3025 Rev. A1; D3026 Rev. A; D3027 Rev. A; D3032 Rev. A; D3033 Rev. A1	<b>Qty:</b>	/ Kits
		Page 2 of 3

Step	Location	Procedure	By	Date	Qty
18	QC2	Inspect parts as they come off the CNC machine			
19	MV	Deburr to take measurement			
20	QC8	Second check			
21	MV	Machine D3027-3 as per Folio FA139 and Dwg D3027 <b>Stack of 8</b>			
22	QC2	Inspect parts as they come off the CNC machine			
23	MV	Deburr to take measurement			
24	QC8	Second check			
25	MV	Machine D3027-5 as per Folio FA139 and Dwg D3027 <b>Stack of 8</b>			
26	QC2	Inspect parts as they come off the CNC machine			
27	MV	Deburr to take measurement			
28	QC8	Second check			
29	MV	Machine D3027-7 as per Folio FA139 and Dwg D3027 <b>Stack of 8</b>			
30	QC2	Inspect parts as they come off the CNC machine			
31	MV	Deburr to take measurement			
32	QC8	Second check			
33	GA	Cut blanks: 20.1" x 1.00" (+0.1/-0.0) as per Dwg D3032 Material: 2024-T3 (QQ-A-250/4) 0.050" thick (M2024T3S.050) <b>Identify as D3032-1</b> Batch:			
34	GA	Radius ends as per Dwg D3032			
35	QC5	Inspect work to Step 34			
36	GA	Cut (2) blanks 18.00" as per Dwg D3033 from D3033-144 extrusion. <b>Deburr (1) blank and identify as D3033-1.</b> Drill and c'sink second blank as per Dwg D3033 using drill Jig D3033-3T1. <b>Deburr holes and identify as D3033-3.</b>			
37	QC5	Inspect work to Step 36			
38	GB	Deburr D3025-1, D3026-1, D3027-1, D3027-3, D3027-5, D3027-7, D3032-1 Stack			
39	GB	Bend D3025-1, D3026-1, D3027-1, D3027-3, D3027-5, D3027-7 Stack			
40	QC5	Inspect work to Step 39			

UNDER REVIEW

**RELEASED**  
03.09.15 RT



W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Mfg / Design Mgr	Approval QC Inspector

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Design Mgr	Approval QC Inspector
			Initial Design Mgr	Action Description Design Mgr	Sign & Date			

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

NOTE: Date & initial all entries

QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

<b>DART AEROSPACE LTD</b>		<b>Work Order:</b>	24591
<b>Description:</b> Floor Provisions Kit		<b>Part Number:</b>	D350-689-013
<b>Dwg:</b> D3025 Rev. A1; D3026 Rev. <sup>B</sup> A; D3027 Rev. <sup>B</sup> A; <sup>B</sup> D3032 Rev. A; D3033 Rev. A1		<b>Qty:</b>	1 Kits
			Page 3 of 3

Step	Location	Procedure	By	Date	Qty																																																																												
41	FP	Chemical Conversion Coat D3025-1, D3026-1, D3027-1, D3027-3, D3027-5, D3027-7, D3032-1, D3033-1 & D3033-3 as per QSI 005 4.1																																																																															
42	QC3	Inspect work to Step 41																																																																															
43	PK	<p><b>Pick: Packing Kit (Note: D3033-1 &amp; D3033-3 are made from material D3033-144 and are not on the BOM)</b></p> <table><thead><tr><th>Qty</th><th>Part Number</th><th>Description</th><th>Batch</th></tr></thead><tbody><tr><td>1</td><td>D3025-1 ✓</td><td>Beam</td><td>B22402 B22403 B22566</td></tr><tr><td>1</td><td>D3026-1</td><td>Channel</td><td>B225892</td></tr><tr><td>1</td><td>D3027-1 ✓</td><td>Clip</td><td>B22402 B22403 B22566</td></tr><tr><td>1</td><td>D3027-3 ✓</td><td>Clip</td><td>B22402 B22403 B22566</td></tr><tr><td>1</td><td>D3027-5 ✓</td><td>Clip</td><td>B22402 B22403 B22566</td></tr><tr><td>4</td><td>D3027-7 ✓</td><td>Clip</td><td>B225891 B22402 B22403 B22566</td></tr><tr><td>1</td><td>D3032-1 ✓</td><td>Spacer</td><td>B22402 B22403 B22566</td></tr><tr><td>2</td><td>D3033-1 ✓</td><td>Seat Track</td><td>B22402 B22403 B22566 B24592</td></tr><tr><td>4</td><td><del>D3033-3</del></td><td><del>Seat Track</del></td><td></td></tr><tr><td>6</td><td>AN960JD10L</td><td>Washer</td><td>m8960</td></tr><tr><td>16</td><td>MS20426AD3-6</td><td>Rivet</td><td>12x m1563/4x m1652T</td></tr><tr><td>17</td><td>MS20426AD4-6</td><td>Rivet</td><td>m2930</td></tr><tr><td>18</td><td>MS20470AD4-5</td><td>Rivet</td><td>m17243</td></tr><tr><td>2</td><td>MS20470AD4-6</td><td>Rivet</td><td>m14206</td></tr><tr><td>30</td><td>MS20470AD5-6</td><td>Rivet</td><td>m2421</td></tr><tr><td>8</td><td>MS21059L3</td><td>Nut Plate</td><td>m14602</td></tr><tr><td>2</td><td>MS24693S273</td><td>Screw</td><td>m495</td></tr><tr><td>6</td><td>MS27039-1-10</td><td>Screw</td><td>m13654</td></tr></tbody></table>	Qty	Part Number	Description	Batch	1	D3025-1 ✓	Beam	B22402 B22403 B22566	1	D3026-1	Channel	B225892	1	D3027-1 ✓	Clip	B22402 B22403 B22566	1	D3027-3 ✓	Clip	B22402 B22403 B22566	1	D3027-5 ✓	Clip	B22402 B22403 B22566	4	D3027-7 ✓	Clip	B225891 B22402 B22403 B22566	1	D3032-1 ✓	Spacer	B22402 B22403 B22566	2	D3033-1 ✓	Seat Track	B22402 B22403 B22566 B24592	4	<del>D3033-3</del>	<del>Seat Track</del>		6	AN960JD10L	Washer	m8960	16	MS20426AD3-6	Rivet	12x m1563/4x m1652T	17	MS20426AD4-6	Rivet	m2930	18	MS20470AD4-5	Rivet	m17243	2	MS20470AD4-6	Rivet	m14206	30	MS20470AD5-6	Rivet	m2421	8	MS21059L3	Nut Plate	m14602	2	MS24693S273	Screw	m495	6	MS27039-1-10	Screw	m13654			
Qty	Part Number	Description	Batch																																																																														
1	D3025-1 ✓	Beam	B22402 B22403 B22566																																																																														
1	D3026-1	Channel	B225892																																																																														
1	D3027-1 ✓	Clip	B22402 B22403 B22566																																																																														
1	D3027-3 ✓	Clip	B22402 B22403 B22566																																																																														
1	D3027-5 ✓	Clip	B22402 B22403 B22566																																																																														
4	D3027-7 ✓	Clip	B225891 B22402 B22403 B22566																																																																														
1	D3032-1 ✓	Spacer	B22402 B22403 B22566																																																																														
2	D3033-1 ✓	Seat Track	B22402 B22403 B22566 B24592																																																																														
4	<del>D3033-3</del>	<del>Seat Track</del>																																																																															
6	AN960JD10L	Washer	m8960																																																																														
16	MS20426AD3-6	Rivet	12x m1563/4x m1652T																																																																														
17	MS20426AD4-6	Rivet	m2930																																																																														
18	MS20470AD4-5	Rivet	m17243																																																																														
2	MS20470AD4-6	Rivet	m14206																																																																														
30	MS20470AD5-6	Rivet	m2421																																																																														
8	MS21059L3	Nut Plate	m14602																																																																														
2	MS24693S273	Screw	m495																																																																														
6	MS27039-1-10	Screw	m13654																																																																														
44	QC4	Inspect Kit 100% for completeness on the W/O																																																																															
45	PK	Package and identify as per PPP D350-689-013 Go back to D350-689-011																																																																															

Rev	Date	Change	Revised By	Approved
A	01.05.29	New issue	EC	
B	01.11.09	Revised Step 6 and Added Inspection Level 21	SM	
C	03.05.07	Reformat; Incorporated D3025-1, D3026-1, D3027-1, D3027-3, D3027-5, D3027-7, D3032-1	KJ/RF RF	

UNDER REVIEW  
 CP 05.08.30  
 CP 05.10.18

11 06.02.23  
**RELEASED**  
 03.09.15 RF

25882

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Mfg / Design Mgr	Approval QC Inspector

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Design Mgr	Approval QC Inspector
			Initial Design Mgr	Action Description Design Mgr	Sign & Date			

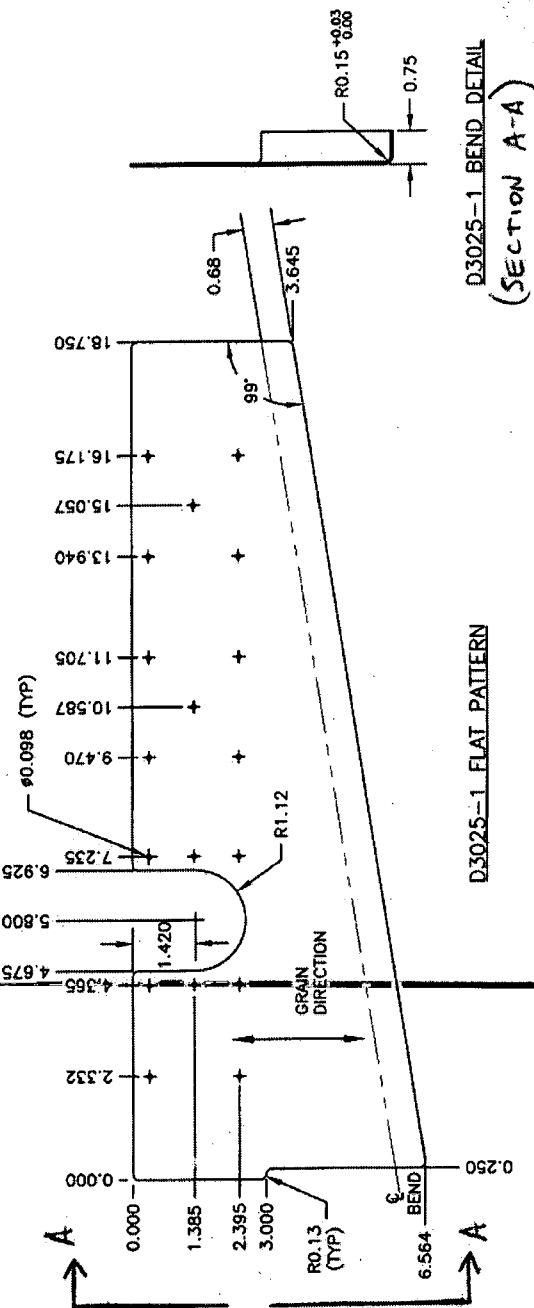
Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

NOTE: Date & initial all entries

QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_



DESIGN RF	DRAWN BY RF	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED #	APPROVED #	DRAWING NO. D3025	REV. A SHEET 1 OF 1
DATE 01.05.18		TITLE BEAM	SCALE 1:4
A	01.05.18	NEW ISSUE	
A1	01.10.19	ADD SECTION A-A	



SHOP  
RETURN TO  
ENGINEERING

100% COPY  
FOR  
REVISION

ORDER

24591

RELEASED  
01.05.30

Copyright © 2001 by DART AEROSPACE LTD

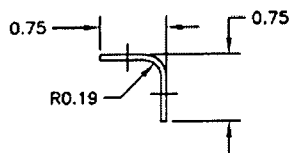
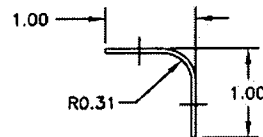
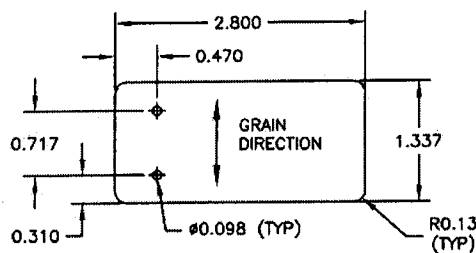
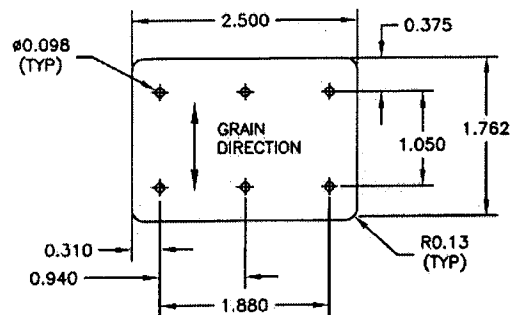
THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.

**DART**

DESIGN RF	DRAWN BY CP	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED [Signature]	APPROVED [Signature]	DRAWING NO. D3027	REV. B SHEET 1 OF 2
DATE 05.09.20		TITLE CLIP	SCALE 1:2
A	01.05.18	NEW ISSUE	
B	05.09.20	REMOVE HOLES FROM -7	

**RELEASED**

05.10.03 [Signature]

**D3027-1 BEND DETAIL****D3027-3 BEND DETAIL****D3027-1 FLAT PATTERN  
(0.063" SHEET)****D3027-3 FLAT PATTERN  
(0.050" SHEET)****NOTES:**

- 1) BREAK ALL UNMARKED SHARP CORNER 0.010 TO 0.020
- 2) MATERIAL: 2024-T3 (QQ-A-250/4)
- 3) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
- 4) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED

COPY  
TURN TO  
ENGINEERING  
CONTROLLED COPY  
NOT TO BE LENT  
WITHOUT NOTICE  
WORK ORDER  
NO. 24591

**Copyright © 2001 by DART AEROSPACE LTD**

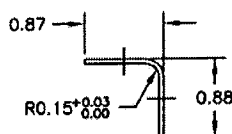
THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.

**DART**

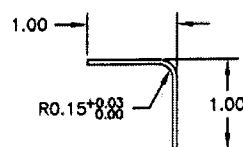
DESIGN RF	DRAWN BY CP	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED [Signature]	APPROVED [Signature]	DRAWING NO. D3027	REV. B SHEET 2 OF 2
DATE 05.09.20	TITLE CLIP	SCALE 1:2	

RELEASED

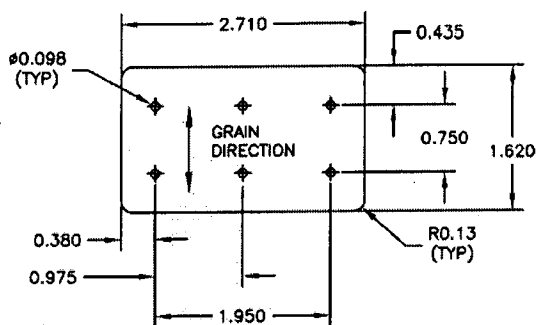
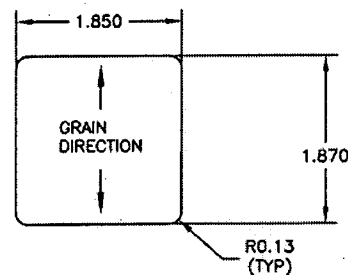
05.10.03 [Signature]



D3027-5 BEND DETAIL



D3027-7 BEND DETAIL

D3027-5 FLAT PATTERN  
(0.050" SHEET)D3027-7 FLAT PATTERN  
(0.050" SHEET)

## NOTES:

- 1) BREAK ALL UNMARKED SHARP CORNER 0.010 TO 0.020
- 2) MATERIAL: 2024-T3 (QQ-A-250/4)
- 3) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
- 4) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED

SHOP COPY  
RETURN TO  
ENGINEERINGCONTROLLED COPY  
NOT TO BE AMENDED  
WITHOUT NOTICE

WORK ORDER

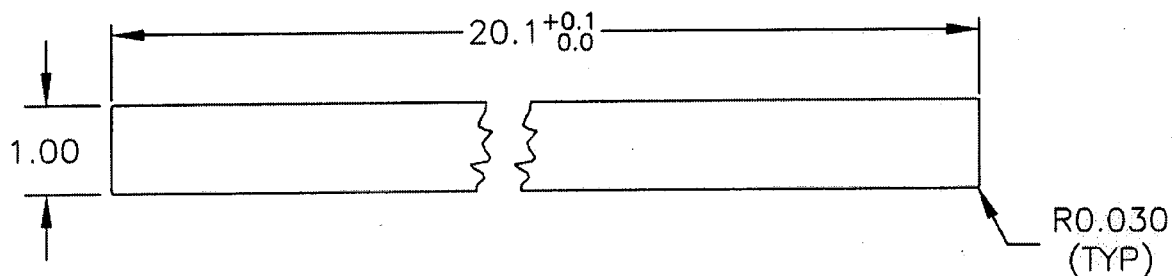
NO. 24591

Copyright © 2001 by DART AEROSPACE LTD

THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.



DESIGN <i>UP</i>	DRAWN BY <i>UP</i>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>#</i>	APPROVED <i>#</i>	DRAWING NO. D3032	REV. A SHEET 1 OF 1
DATE 01.05.18		TITLE SPACER	SCALE 1:2
A	01.05.18	NEW ISSUE	



D3032-1

- 1) MATERIAL: 2024-T3 SHEET (QQ-A-250/4) 0.050 THICK
- 2) FINISH: ACID ETCH AND ALODINE PER DART QSI 005 4.1
- 3) ALL DIMENSIONS ARE IN INCHES
- 4) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED

RELEASED  
01.05.30 *#*

SHOE/COPY

RETURN TO  
ENGINEERING

UNCONTROLLED COPY

NOT TO AMENDMENT  
WITHOUT NOTICE

WORK ORDER  
NO. 24591

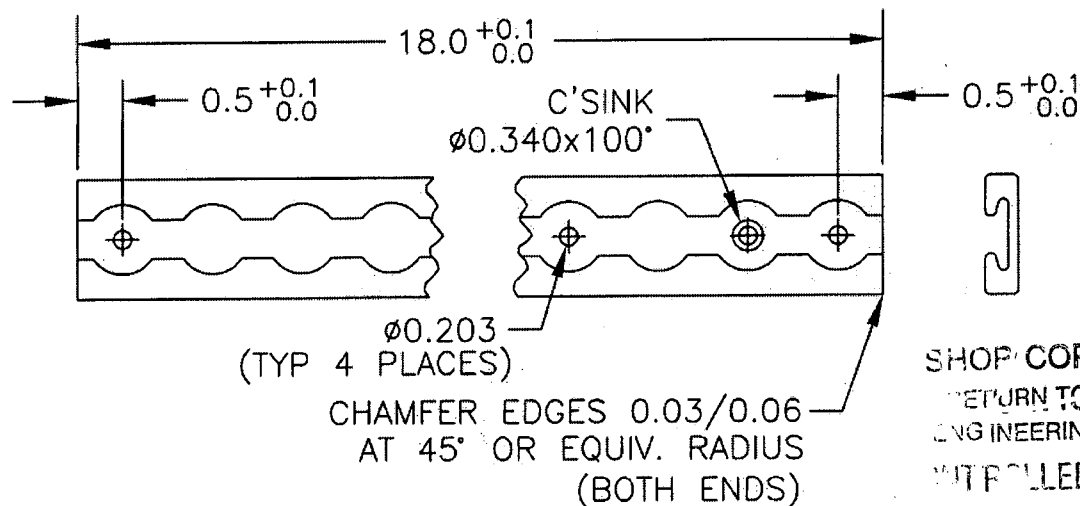
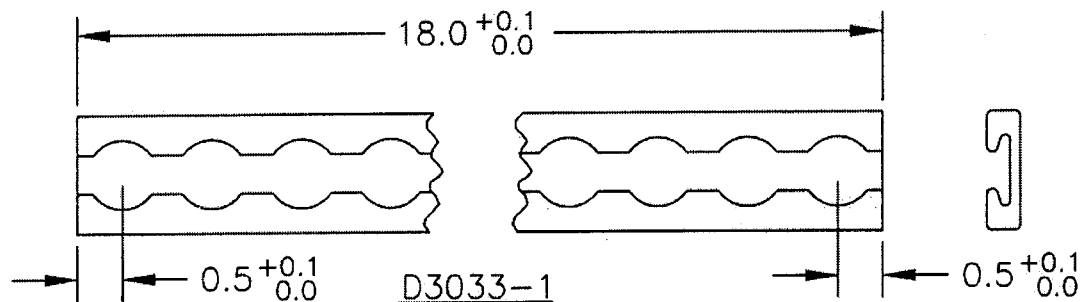
Copyright © 2001 by DART AEROSPACE LTD

THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.



DESIGN	CP	DRAWN BY	CP	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED	A	APPROVED	A	DRAWING NO. D3033	REV. A SHEET 1 OF 1
DATE	01.05.18	TITLE	SEAT TRACK	SCALE	1:2
A	01.05.18	NEW ISSUE			
AI	03.08.25	NOTE 1 MODIFIED			

## SPECIFICATION CONTROL DRAWING



D3033-3  
(CAN MAKE FROM D3033-1)

SHOP COPY  
RETURN TO  
ENGINEERING  
CONTROLLED COPY  
NOT TO BE AMENDED  
WITHOUT NOTICE

D3033-1 & D3033-3

- 1) MAKE FROM: ANCRA, P/N 40456-11-144  
OR BROWNLIN, P/N 20276-144-0-0
- 2) DESCRIPTION: MEDIUM DUTY SEAT TRACK
- 3) FINISH: ACID ETCH & ALODINE PER DART QSI 005 4.1
- 4) ALL DIMENSIONS ARE IN INCHES
- 5) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED

WORK ORDER

NO. 24591

D3033-144 AI

RELEASED  
01.05.30

Copyright © 2001 by DART AEROSPACE LTD

THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.





DESIGN CP	DRAWN BY CP	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED	APPROVED	DRAWING NO. DSI 9311	REV. A SHEET 1 OF 2
DATE 05.09.22		TITLE INSTALLATION CHANGE	SCALE NTS
A	05.09.22	NEW ISSUE	

## **DART SERVICE INSTRUCTION**

### **TO AMEND INSTALLATION INSTRUCTIONS IIN-D350-689 REV. A**

REF. CANADIAN STC: SH02-33  
REF. FAA STC: SR01620NY

#### **PURPOSE:**

On some aircraft, the holes in the D3026-1 Channel conflicted with existing holes in the floor when there is an existing stringer at LBL 27.33. To prevent this from happening, the holes have been removed from the D3026-1 Channel and it will be required that the customer locate the rivets holes depending on whether this stringer exists or not. Also, the D3027-1 Clips will be provided without holes and the D3033-3 Seat Track will be replaced with an undrilled D3033-1 Seat Track. The D350-689-013 Floor Provision Kit should be installed per IIN-D350-689 Rev.A with the changes noted below.

#### **INSTALLATION**

Section 3.2 of Installation Instructions IIN-D350-689 Rev.A, "Installation of the D350-689-013 Floor Provision Kit", is revised as followed:

- 14) From middle of existing copilot seat inboard rubbing strip, measure 18.35" as shown in Figure 1 of this service instruction and mark for installation of left side D3026-1 Channel.
- 15) If there is an existing stringer at LBL 27.33, it will need to be removed from that location. Locate D3026-1 Spacer as shown in Figure 1 of this service instruction and transfer existing holes from the aircraft floor to the D3026-1 Channel & D3032-1 Spacer. Ensure 1.0" to 1.5" rivet pitch and add additional holes if required. If there is no existing stringer, locate D3026-1 Channel & D3032-1 Spacer as shown in Figure 1 of this service instruction and drill  $\varnothing 0.128$ " holes on a 1.0" to 1.5" pitch.
- 16) Remove existing rivets at STA 50.94 (1294mm) and 70.47 (1790mm) that interfere with installation of seat tracks (refer to Figure 1 of this service instruction).
- 17) Countersink holes in the D3032-1 Spacer for MS20426AD4-6 rivets. Install D3026-1 Channel and the D3032-1 Spacer using MS20426AD4-6 rivets.
- 18) Locate D3027-7 Clips as shown in Figure 5 of IIN-D350-689 Rev.A. Locate rivets holes to either pick up on or avoid existing rivet holes and transfer drill  $\varnothing 0.156$  to the aircraft at STA 50.94 (1294mm) and STA 70.47 (1790mm) and to the D3026-1 Channel. Install D3027-7 Clips using MS20470AD5-6 rivets.
- 19) Locate the aft ends of D3033-1 Seat Tracks at STA 70.47 (1790mm) as shown in Figure 1 of this service instruction. One D3033-1 should be centered on the existing inboard rubbing strip, while the other should be 18.53" (470.7mm) to the left.
- 20) Transfer drill  $\varnothing 0.128$  to D3033-1 Seat Tracks (8 places) as shown in Figure 1 of this service instruction. Open seat track and aircraft floor holes to  $\varnothing 0.191$  and countersink hole for MS24693-S273 screw in seat track. Drill  $\varnothing 0.191$  through the aircraft floor. Install MS21059L3 nutplates (8 locations) using MS20426AD3-6 rivets. Install the qty(2) D3033-1 Seat Tracks using the hardware shown in Figure 1 of this service instruction.

CANADA DEPARTMENT OF TRANSPORT AIRCRAFT CERTIFICATION BRANCH	
<b>REFERENCE ONLY</b>	
<b>APPROVED</b>	
BY:	D. SHEPHERD (DE # 02)
DATE:	05.09.22
CERT. NO.:	SH02-33
ISSUE NO.:	1

**Copyright © 2005 by DART AEROSPACE LTD**

THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.

> a part next door. The conversation was the most unpleasant  
> conversation I have had with a customer for years. Bill - I think you  
> and I need to discuss this one.

>  
> Peggy

>  
> ----- Original Message -----

> From: "Jason Loader" <jloader@eaglecopters.com>

> To: "Bill Beckett (E-mail)" <billb@dartaero.com>; "Dale Trepanier  
(E-mail)" <dalet@dartaero.com>

> Cc: "David Shepherd (E-mail)" <davids@dartaero.com>; "Peggy McDonald

> (E-mail)" <peggym@dartaero.com>

> Sent: Wednesday, August 24, 2005 1:55 PM

> Subject: D350-689 Dual Seat Installation

>  
>  
> > A customer brought an issue to my attention regarding the  
> > installation

of  
> > the outboard stringer. The problem is in 3.2 step 15 where it states  
that

> if  
> > there is an existing stringer, it is to be removed and new holes are  
> > to

be  
> > transferred from the D3026-1 Channel through the floor. These new

> > holes

> will

> > not line up with the existing holes in the floor, leaving the floor  
> looking

> > like swiss cheese in this area. It would be better if there were no  
holes

> in

> > the D3026-1 Channel and the existing holes in the floor were

> > transferred

> to

> > the channel. This also affects the D3027-1 clips which should also

> > be supplied without holes. The instructions would also have to

> > address

cases

> > where this stringer is not installed, and supply the customer with

> > rivet hole locations for these blank parts as per the original

> > fabrication drawing. It may be a good idea to supply the current

> > inventory of these

> kits

> > with the undrilled parts.

> >

> > Jason

>

21879 lpc 11/15/04  
22059 lpc 8/9/05

## Dale Trepanier

---

**From:** Bill Beckett [billb@dartaero.com]  
**Sent:** Thursday, August 25, 2005 2:01 PM  
**To:** Peggy McDonald  
**Cc:** David Shepherd; Chris Provencal; Linda Lacelle; Dale Trepanier; Jason Loader  
**Subject:** RE: D350-689 Dual Seat Installation

**Follow Up Flag:** Follow up  
**Flag Status:** Completed

REFERENCE ONLY

Peggy,  
I have gone over the seat issue in detail with Chris and David. We will be making the necessary changes to allow customers to drill their own seat rail and C channel, either based on the original stringer holes (provided they meet a minimum standard) or on our specified hole pattern. We will immediately quarantine stock in the meantime.

Bill

-----Original Message-----

**From:** Peggy McDonald [mailto:peggym@dartaero.com]  
**Sent:** August 25, 2005 9:24 AM  
**To:** Bill Beckett  
**Subject:** Re: D350-689 Dual Seat Installation

sounds - good.

I also need about 1/2 to discuss a few other issues with you (shoulder harness kits and 206 gnd handling)

Peggy

----- Original Message -----

**From:** "Bill Beckett" <billb@dartaero.com>  
**To:** "Peggy McDonald" <peggym@dartaero.com>  
**Cc:** "Chris Provencal" <chrisp@dartaero.com>  
**Sent:** Thursday, August 25, 2005 7:07 AM  
**Subject:** RE: D350-689 Dual Seat Installation

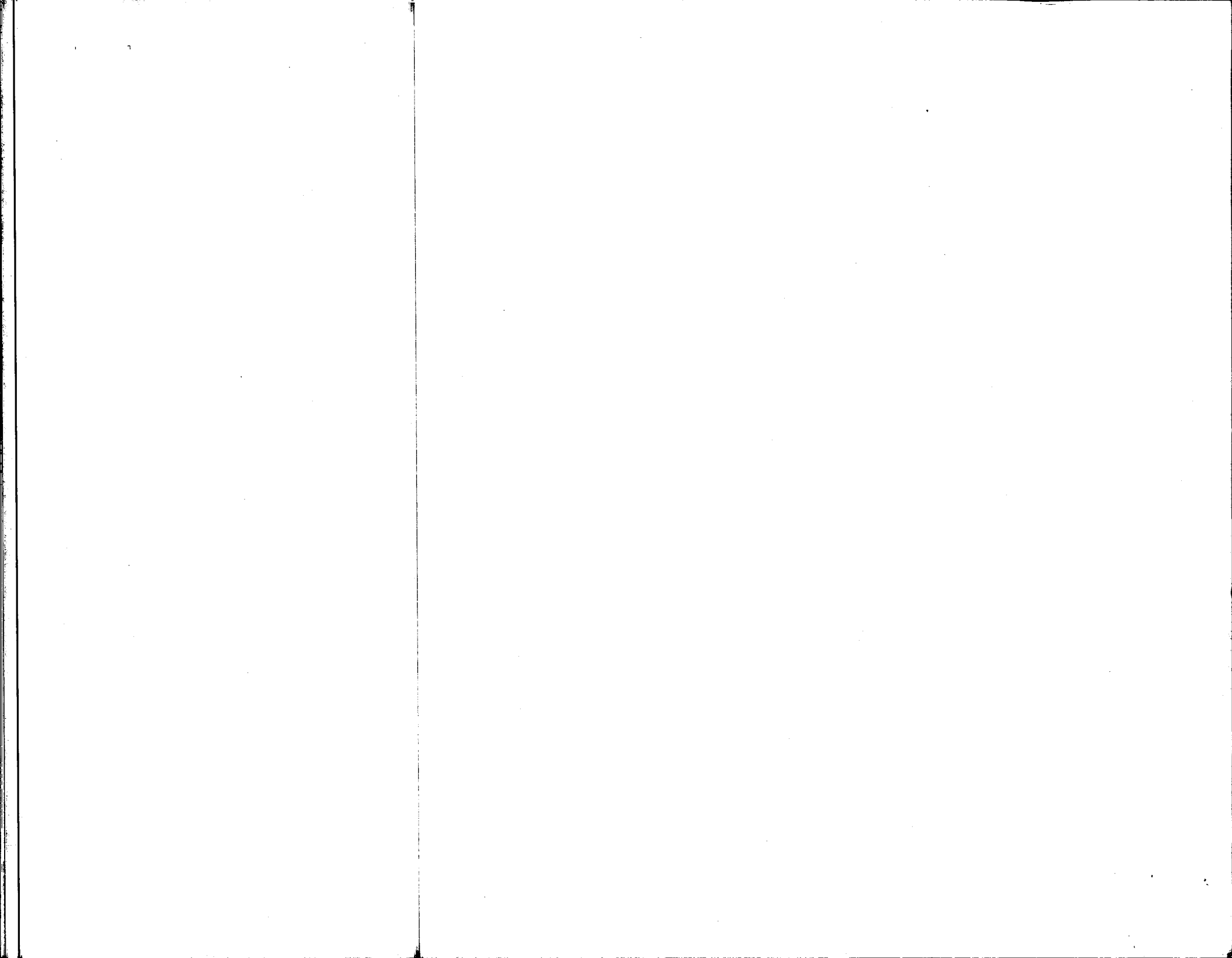
> Peggy,  
> How about this morning at 11:00 am?  
> Bill  
> PS: Chris - please review the IIN and bring a copy to this meeting.

> -----Original Message-----

> **From:** Peggy McDonald [mailto:peggym@dartaero.com]  
> **Sent:** August 24, 2005 2:23 PM  
> **To:** Jason Loader; Bill Beckett (E-mail); Dale Trepanier (E-mail)  
> **Cc:** David Shepherd (E-mail)  
> **Subject:** Re: D350-689 Dual Seat Installation

>  
> This customer was extremely frustrated when I talked to him at the end  
> of the day yesterday. He also had to machine a part across the street  
> because he couldn't get the one supplied with the kit to work.

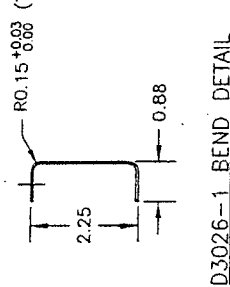
>  
> The only way to possible smooth this one over is to offer a credit  
> towards his next purchase for all the inconvenience, down time and  
> having to  
machine



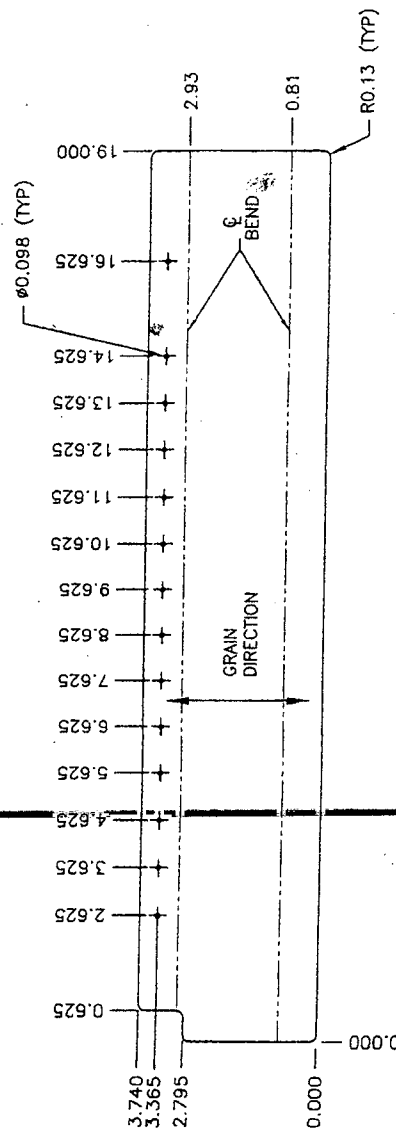
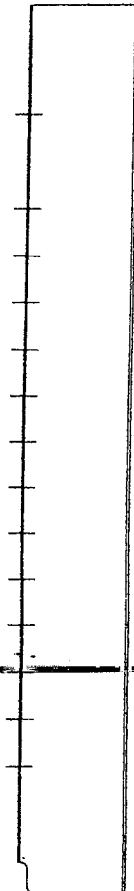


DESIGN RF	DRAWN BY RF	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED [Signature]	APPROVED [Signature]	DRAWING NO. D3026	REV. A SHEET 1 OF 1
DATE 01.05.18		TITLE CHANNEL	SCALE 1:4
A	01.05.18	NEW ISSUE	

REFERENCE ONLY



CONTROLLED COPY



D3026-1 FLAT PATTERN

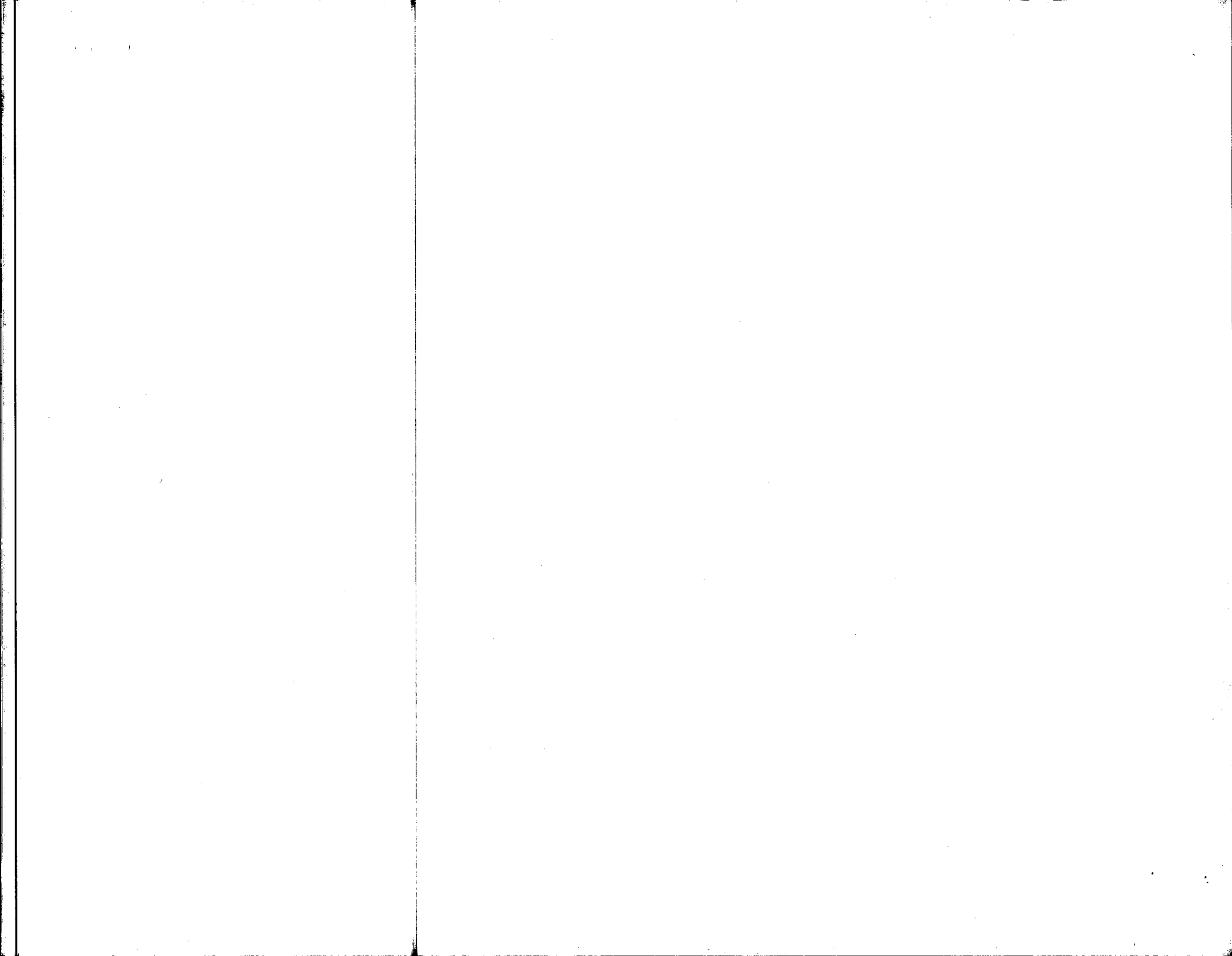
NOTES:

- 1) BREAK ALL UNMARKED SHARP CORNER 0.010 TO 0.020
- 2) MATERIAL: 2024-T3 (QQ-A-250/4) 0.050" THICK
- 3) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
- 4) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED

RELEASED  
01.05.30

Copyright © 2001 by DART AEROSPACE LTD

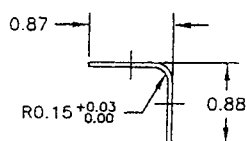
THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.



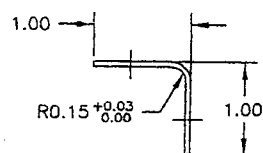


DESIGN RF	DRAWN BY RF	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED [Signature]	APPROVED [Signature]	DRAWING NO. D3027	REV. A SHEET 2 OF 2
DATE 01.05.18		TITLE CLIP	SCALE 1:2

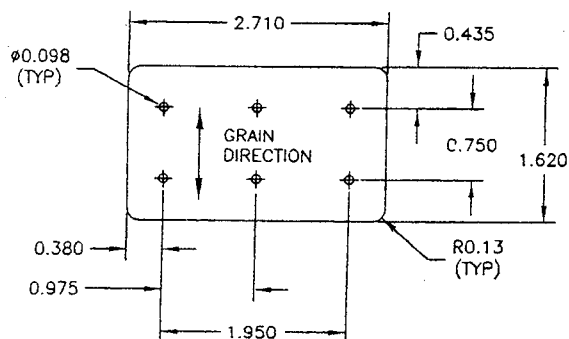
REFERENCE ONLY



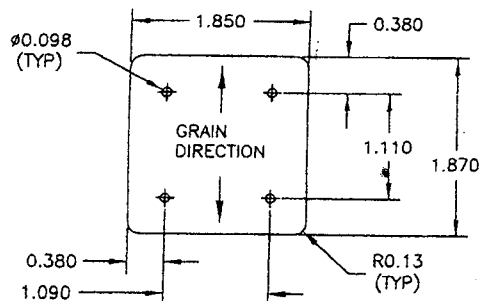
D3027-5 BEND DETAIL



D3027-7 BEND DETAIL



D3027-5 FLAT PATTERN  
(0.050" SHEET)



D3027-7 FLAT PATTERN  
(0.050" SHEET)

CONTROLLED COPY

NOTES:

- 1) BREAK ALL UNMARKED SHARP CORNER 0.010 TO 0.020
- 2) MATERIAL: 2024-T3 (QQ-A-250/4)
- 3) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
- 4) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED

RELEASED  
01-05-30

Copyright © 2001 by DART AEROSPACE LTD

THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.





Corrective Action Report				CAR 181A	
Raised by: Dale Trepanier		Source: Eagle		Sheet No. of	
Issue for Dept./Supplier: Engineering/Design		Date: 05-09-10		Priority: HIGH LOW	
Product/Service: D350-689					
Area of Standard: QSI		Section A Description of Issue			
QSP		The holes in the D3026-1 Channel conflict with existing holes in the floor when there is an existing Stringer A HBL 27.33.  ECN 740			
QSPM					
Documents:					
P/O					
Invoice					
W/O					
Batch No.					
TSR					
Drawing					
Forward to Director, Quality Assurance on completion of this box					
DQA: Section B: Indicate who is responsible for creating C/A, and a completion date. Section C: Indicate who will verify completion of C/A.					
Section B Corrective Action		Responsible for Investigation/CA: Chris Provencal To be done by: 05/10/30			
No	Initial	Action Description	Responsible	Due date	Sign/Date
1	CP	Revise D3026 & D3027. Removed holes from D3026-1 & D3027-1, customer will drill holes to suit aircraft. Release DSI 9311 Rev A.	CP	05.10.17	05.10.17
2	CP	Rework all kits in stock with new D3026-1 & D3027-7 & DSI 9311 paperwork	LL	15-10-03	05-10-03
REFERENCE ONLY					
Preventive Action Required: NO YES #			Fault Category: Eng/Design		
Section C Verification of C/A		Responsible for Verification of CA: Dale Trepanier			
No	Verification Method	Sign	Date	Forward to DQA on Completion of Verification	
1	ECN has been done and all relevant people have been notified	(Signature)	05/10/17	DQA: (Signature)	
2	Kits have all been re-worked.			Date: 05/10/17	
QA Purposes only		C/A Closed (Signature)		Date: 05/10/17	

**David Shepherd**

---

**From:** "Jason Loader" <jloader@eaglecopters.com>  
**To:** "Bill Beckett (E-mail)" <billb@artaero.com>; "Dale Trepanier (E-mail)" <dallet@artaero.com>  
**Cc:** "David Shepherd (E-mail)" <davids@artaero.com>; "Peggy McDonald (E-mail)" <peggym@artaero.com>  
**Sent:** Wednesday, August 24, 2005 11:55 AM  
**Subject:** D350-689 Dual Seat Installation

A customer brought an issue to my attention regarding the installation of the outboard stringer. The problem is in 3.2 step 15 where it states that if there is an existing stringer, it is to be removed and new holes are to be transferred from the D3026-1 Channel through the floor. These new holes will not line up with the existing holes in the floor, leaving the floor looking like swiss cheese in this area. It would be better if there were no holes in the D3026-1 Channel and the existing holes in the floor were transferred to the channel. This also affects the D3027-7 clips which should also be supplied without holes. The instructions would also have to address cases where this stringer is not installed, and supply the customer with rivet hole locations for these blank parts as per the original fabrication drawing. It may be a good idea to supply the current inventory of these kits with the undrilled parts.

Jason

TO CHRIS PROVENCAL

FAX: 1-613-632-4443

pg# 143  
05.04.26

---

# ENGINEERING CHANGE NOTICE

DART AEROSPACE LTD		ECN #: 740			
Date: 05.10.05		Created By: CP			
Project No: D350-689		Checked By: <del>CP</del>			
Project Name: Dual Highback SEAT		Approved By: <del>CP</del> (Management if reqd) N/A			
Description of Change: Release: - DSI 9311 Rev A - D3027 Rev B - D3026 Rev B					
Notification/Acceptance	Affected	Initials	Authorization		
QA	✓		OK per <del>CP</del>		
Production	✓	U			
Planning	✓				
Marketing	✓				
Engineering Actions	Yes	No	Responsible	To happen by:	Complete
Update Blue/Pink File	✓		KJ/CP	05.10.07	05.10.05 KJ
Update DSI File	✓		KJ	05.10.07	05.10.05 KJ
Update D-Part Master Binder	✓	✓	KJ	05.10.07	05.10.05 KJ
Update Grey Project Binder		✓			
Update DEO Binder	✓		KJ	05.10.07	05.10.05 KJ
Update Master Document List		✓			
Update Drawing Approval Record	✓		KJ	05.10.07	05.10.05 KJ
Update Change Record Form	✓		CP	05.10.07	CP 05.10.05
Move Electronic File	✓		KJ	05.10.07	05.10.05 KJ
Notify TCA of Change	✓		KJ/DS	05.11.07	N/A <del>CP</del> 05.11.27
Notify FAA of Change		✓			
Update QSI 021		✓			
Update QSI 036		✓			
Scan Documents	✓		KJ/AP	05.10.07	05.10.05 KJ
Update MIS Database		✓			
Update Access Database		✓			
Verification ARC		✓			
Create/Update STC Approval List		✓			
Create/Update IPP's	✓		KJ/SLM/EC	05.10.07	05.10.07 KJ
Create/Update BOM's	✓		KJ	05.10.07	05.10.07 KJ
Create/Update PPP's	✓		KJ	05.10.07	05.10.05 KJ
Update Paperwork Kits in Production	✓		KJ	05.10.07	05.10.05 KJ
Update Paperwork Kits in Stock	✓		KJ/U	05.10.07	05.10.05 U
Rework/Scrap Current Production	✓		U	05.10.07	05.10.24 KJ for U
Rework/Scrap Kits in Stock?	✓		U	05.10.07	05.10.05 KJ per U
Create/Update Laminated Dwgs		✓			
Create/Update Controlled Dwgs/PDF	✓		KJ/AP	05.10.07	05.10.05 KJ
Create/Update FAI sheets	✓		SLM	05.10.07	05.10.06 KJ
Create/Update CNC Programs	✓		SLM	05.10.07	05.11.27 KJ
Create/Update Tooling		✓			
Create/Update DXF File					
MPP required?		✓			
Notify Previous Customers		✓			
Notify Eurocopter France		✓			
Notes: - D3026-1 has all holes removed, D3027-7 has all holes removed - D350-689-013 now has qty(2) D3033-1 Seat track instead of (1) D3033-1 & (1) D3033-3 - D350-689-011 & -013. Now CHANGE 002 - update all kits & parts in production/stock with new parts & paperwork - scrap old parts (D3026-1, D3027-7)					

#### 4. WEIGHT AND BALANCE

The following weight and balance information is for the Dart Dual High Back Seat Installation. The weight and balance of the parts that are removed from the aircraft to perform this installation are the responsibility of the installer.

Installation	Weight	LATERAL		LONGITUDINAL	
		Arm	Moment	Arm	Moment
D350-689-011	27.0 lb	-18.2 in	-491 in-lb	60.7 in	1639 in-lb
Dual High Back Seat Installation	12.2 kg	-0.46 m	-5.6 m-kg	1.54 m	18.8 m-kg
D350-689-013	2.0 lb	-18.2 in	-36 in-lb	60.7 in	121 in-lb
Floor Provisions Kit	0.9 kg	-0.46 m	-0.4 m-kg	1.54 m	1.4 m-kg

#### 5. PARTS LIST

Qty		Part Number	Description
X		D350-689-011	DUAL HIGH BACK SEAT INSTALLATION, LH
1	X	D350-689-013	FLOOR PROVISIONS KIT
1		X D350-689-041	DUAL HIGH BACK SEAT ASSEMBLY
	2	D3016-041	SEAT FRAME ASSEMBLY
	1	D3017-041	BACK FRAME ASSEMBLY
1		D3018-1	SEAT CUSHION
1		D3019-1	BACK CUSHION
	1	D3021-041	TUBE ASSEMBLY
	1	D3022-1	SEAT PAN
	1	D3023-1	BACK PANEL
	3	D3024-1	SPACER
1		D3025-1	BEAM
1		D3026-1	CHANNEL
1		D3027-1	CLIP
1		D3027-3	CLIP
1		D3027-5	CLIP
4		D3027-7	CLIP
	4	D3028-1	STUD
	2	D3029-1	SPRING
	2	D3030-1	LOCK
	2	D3031-1	LOOP
1		D3032-1	SPACER
1		D3033-1	SEAT TRACK
1		D3033-3	SEAT TRACK
6	23	AN960JD10L	WASHER
	3	AN3-12A	BOLT
16		MS20426AD3-6	RIVET
17		MS20426AD4-6	RIVET
18		MS20470AD4-5	RIVET
2		MS20470AD4-6	RIVET
30		MS20470AD5-6	RIVET
	46	MS20600AD4W2	RIVET
8		MS21059L3	NUTPLATE
6		MS27039-1-10	SCREW
	4	MS27039-1-17	SCREW
	12	MS27039-1-19	SCREW
	4	MS24693-S272	SCREW
2		MS24693-S273	SCREW
	23	MS21042L3	NUT (OR MS21042-3)

• COPYRIGHT © 2001 BY DART AEROSPACE LTD •

THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.

Revision: A

Date: 01.05.30

5/46

(2451 loss)

<b>DART AEROSPACE LTD</b>	<b>Work Order:</b>	24591
<b>Description:</b> Dual High Back Seat Assembly	<b>Part Number:</b>	D350-689-041
<b>Dwg:</b> IIN-D350-689 Rev. A page 9; D3016 Rev. A; D3017 Rev. A D3021 Rev. A; D3022 Rev. A; D3023 Rev. A	<b>Qty:</b>	1
		Page 1 of 3

Step	Location	Procedure	By	Date	Qty																								
1	DC	Issue Traveler		05.10.18	1																								
2	WS	Cut tubes to make (2) D3016-041 subframes as per Dwg D3016 Material: AISI 4130N tube, Ø3/4" x 0.049" wall (M4130N-T0750W049) AISI 4130N tube, Ø1/2" x 0.049" wall (M4130N-T0500W049) AISI 4130N tube, Ø1.0" x 0.049" wall (M4130N-T1000W049) <u>Identify properly and cut all tubes as per Dwg D3016</u>		06/02/08	1																								
3	WS	Cut tube to make D3021-041 assembly as per Dwg D3021 Material: AISI 4130N tube, Ø3/4" x 0.049" wall (M4130N-T0750W049) <u>Identify for D3021-041</u>		06/02/08	1																								
4	WS	Cut tube to make D3017-041 back frame assembly as per Dwg D3017 Material: AISI 4130N tube, Ø3/4" x 0.049" wall (M4130N-T0750W049) <u>Identify for D3017-041</u>		06/02/08	1																								
5	WS	Cut (2) blanks (0.80" x 0.80") D3017-11 end cap for D3021-041. Cut (2) blanks (0.80" x 0.80") D3017-11 end cap for D3017-041. Material: AISI 4130N sheet, 18 guage (0.050") thick (M4130N-S049) <u>Identify properly</u>		06/02/08	1																								
6	WS	Deburr tubes		06/02/08	1																								
7	QC5	Inspect work to Step 6		06/02/08	1																								
8	WS	Weld (2) D3016-041 subframes as per Dwg D3016 and QSI 004 using welding Jig D3016-041T1 <b>Pick:</b> <table border="1"> <thead> <tr> <th>Qty</th> <th>Part Number</th> <th>Description</th> <th>Batch</th> </tr> </thead> <tbody> <tr> <td>2</td> <td>D3016-13</td> <td>Bracket</td> <td>B16404</td> </tr> <tr> <td>2</td> <td>D3016-15</td> <td>Gusset</td> <td>B16298</td> </tr> <tr> <td>2</td> <td>D3016-17</td> <td>Gusset</td> <td>B22066</td> </tr> <tr> <td>4</td> <td>D3020-1</td> <td>Fitting</td> <td>B22690</td> </tr> <tr> <td>A/R</td> <td></td> <td>4130 Rod</td> <td>M9430</td> </tr> </tbody> </table> <u>Identify as D3016-041</u>	Qty	Part Number	Description	Batch	2	D3016-13	Bracket	B16404	2	D3016-15	Gusset	B16298	2	D3016-17	Gusset	B22066	4	D3020-1	Fitting	B22690	A/R		4130 Rod	M9430		06/02/08	1
Qty	Part Number	Description	Batch																										
2	D3016-13	Bracket	B16404																										
2	D3016-15	Gusset	B16298																										
2	D3016-17	Gusset	B22066																										
4	D3020-1	Fitting	B22690																										
A/R		4130 Rod	M9430																										
9	QC9	Inspect weld		06/02/08	1																								
10	WS	Drill tube for D3021-041 assembly as per Dwg D3021 using tool D3021-041T1. Transfer holes to D3016-041 subframes as per Dwg IIN-D350-689.		06/02/08	1																								
11	WS	Deburr		06/02/08	1																								

RELEASED  
1/5/20

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Mfg / Design Mgr	Approval QC Inspector

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Design Mgr	Approval QC Inspector
			Initial Design Mgr	Action Description Design Mgr	Sign & Date			

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

NOTE: Date & initial all entries

QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

<b>DART AEROSPACE LTD</b>		<b>Work Order:</b>	24591
<b>Description:</b> Dual High Back Seat Assembly		<b>Part Number:</b>	D350-689-041
<b>Dwg:</b> IIN-D350-689 Rev. A page 9; D3016 Rev. A; D3017 Rev. A D3021 Rev. A; D3022 Rev. A; D3023 Rev. A		<b>Qty:</b>	1
		Page 2 of 3	

Step	Location	Procedure	By	Date	Qty												
12	WS	Weld D3021-041 assembly as per Dwg D3021 and QSI 004. Inspect for foreign objects as per QSI 024. A/R 4130 Rod Batch: <u>M9430</u> <b>Identify as D3021-041</b>	AA	06/02/08	1												
13	WS	Deburr	AA	06/02/08	1												
14	QC9	Inspect weld	PD	06-02-08	1												
15	WS	Weld back frame assembly as per Dwg D3017 and QSI 004 using welding Jig D3017-041T1 <b>Pick:</b> <table><tr><td>Qty</td><td>Part Number</td><td>Description</td><td>Batch</td></tr><tr><td>3</td><td>D3017-7</td><td>Lug</td><td><u>A 22411</u></td></tr><tr><td>A/R</td><td>4130 Rod</td><td></td><td><u>M9430</u></td></tr></table> <b>Identify as D3017-041</b>	Qty	Part Number	Description	Batch	3	D3017-7	Lug	<u>A 22411</u>	A/R	4130 Rod		<u>M9430</u>	AA	06/02/08	1
Qty	Part Number	Description	Batch														
3	D3017-7	Lug	<u>A 22411</u>														
A/R	4130 Rod		<u>M9430</u>														
16	WS	Deburr	AA	06/02/08	1												
17	QC9	Inspect weld	PD	06-02-08	1												
18	GA	Cut seat pan (32.00" x 14.75") as per template D3022-1T1 & Dwg D3022. <b>grain along 32.00"</b> Material: 2024-T3 (QQ-A-250/4) 0.032" thick sheet (M2024T3S.032) <b>Identify for D3022-1</b> Batch: <u>M12758</u>	AA	06/02/08	1												
19	GA	Cut back panel (29.75" x 28.100") as per template D3023-1T1 & Dwg D3023. <b>grain along 28.100"</b> Material: 2024-T3 (QQ-A-250/4) 0.032" thick sheet (M2024T3S.032) <b>Identify for D3023-1</b> Batch: <u>M12758</u>	AA	06/02/08	1												
20	GA	Drill and bend D3022-1 as per template D3022-1T1 & Dwg D3022 <b>Identify as D3022-1</b>	AA	06/02/08	1												
21	GA	Drill and cut slot D3023-1 as per template D3023-1T1 & Dwg D3023. <b>Identify as D3023-1</b>	AA	06/02/08	1												
22	QC5	Inspect work to Step 21	PD	06-02-08	1												
23	GA	Transfer drill rear holes on D3022-1 seat pan as per Dwg D3022. Form D3023-1 and ensure back panel fits back frame assembly correctly according to Dwg D3023. Fit and adjust as required.	AA	06/02/08	1												
24	FP	Acid etch and alodine as per QSI 005 4.1 D3022-1 and D3023-1	MM	06 02 09	1												
25	FP	Install paint screws on fitting ends.	MM	06 02 09	1												
26	FP	Powder Coat Grey Sandtex (Ref: 4.3.5.6) as per QSI 005 4.3 (2) D3016-041, (1) D3017-041, (1) D3021-041, (1) D3022-1 & (1) D3023-1	MM	06-02-09	1												
27	QC3	Inspect Powder Coat	MM	06 02 09	1												

**RELEASED**  
06/05/09



W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Mfg / Design Mgr	Approval QC Inspector

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Design Mgr	Approval QC Inspector
			Initial Design Mgr	Action Description Design Mgr	Sign & Date			

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

NOTE: Date & initial all entries

QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

<b>DART AEROSPACE LTD</b>		<b>Work Order:</b>	24591
<b>Description:</b> Dual High Back Seat Assembly		<b>Part Number:</b>	D350-689-041
<b>Dwg:</b> IIN-D350-689 Rev. A page 9; D3016 Rev. A; D3017 Rev. A D3021 Rev. A; D3022 Rev. A; D3023 Rev. A		<b>Qty:</b>	1
			Page 3 of 3

Step	Location	Procedure	By	Date	Qty																																																
28	GA	Rivet back panel (D3023-1) to back frame (D3017-1) as per Dwg IIN-D350-689 <b>Pick:</b> <table><tr><th>Qty</th><th>Part Number</th><th>Description</th><th>Batch</th></tr><tr><td>40</td><td>MS20600AD4W2</td><td>Rivet</td><td>M4747</td></tr><tr><td>6</td><td>MS20600AD4W3</td><td>Rivet</td><td>M13767</td></tr></table>	Qty	Part Number	Description	Batch	40	MS20600AD4W2	Rivet	M4747	6	MS20600AD4W3	Rivet	M13767	SB	06/02/13	①																																				
Qty	Part Number	Description	Batch																																																		
40	MS20600AD4W2	Rivet	M4747																																																		
6	MS20600AD4W3	Rivet	M13767																																																		
29	QC5	Inspect work to Step 28	J	06-02-13	1																																																
30	FP	Powder Coat Grey Sandtex (Ref: 4.3.5.6) as per QSI 005 4.3 D3017-1 & D3023-1	FC	06/02/20	1																																																
31	QC3	Inspect Powder Coat	SB	06/02/21	1																																																
32	GA	Assemble as per Dwg IIN-D350-689 <b>Pick:</b> <table><tr><th>Qty</th><th>Part Number</th><th>Description</th><th>Batch</th></tr><tr><td>3</td><td>D3024-1</td><td>Spacer</td><td>B24629</td></tr><tr><td>4</td><td>D3028-1</td><td>Stud</td><td>B18165</td></tr><tr><td>2</td><td>D3029-1</td><td>Spring</td><td>B22346</td></tr><tr><td>2</td><td>D3030-1</td><td>Lock</td><td>B22723</td></tr><tr><td>2</td><td>D3031-1</td><td>Loop</td><td>B17178</td></tr><tr><td>3</td><td>AN3-12A</td><td>Bolt</td><td>M18369</td></tr><tr><td>23</td><td>AN960JD10L</td><td>Washer</td><td>M16235</td></tr><tr><td>23</td><td>MS21042L3 ✓</td><td>Nut (or -3)</td><td>M19690</td></tr><tr><td>4</td><td>MS24693-S272</td><td>Screw</td><td>M10248</td></tr><tr><td>4</td><td>MS27039-1-17</td><td>Screw</td><td>M11540</td></tr><tr><td>12</td><td>MS27039-1-19</td><td>Screw</td><td>M11573</td></tr></table>	Qty	Part Number	Description	Batch	3	D3024-1	Spacer	B24629	4	D3028-1	Stud	B18165	2	D3029-1	Spring	B22346	2	D3030-1	Lock	B22723	2	D3031-1	Loop	B17178	3	AN3-12A	Bolt	M18369	23	AN960JD10L	Washer	M16235	23	MS21042L3 ✓	Nut (or -3)	M19690	4	MS24693-S272	Screw	M10248	4	MS27039-1-17	Screw	M11540	12	MS27039-1-19	Screw	M11573	SP	06/02/21	1
Qty	Part Number	Description	Batch																																																		
3	D3024-1	Spacer	B24629																																																		
4	D3028-1	Stud	B18165																																																		
2	D3029-1	Spring	B22346																																																		
2	D3030-1	Lock	B22723																																																		
2	D3031-1	Loop	B17178																																																		
3	AN3-12A	Bolt	M18369																																																		
23	AN960JD10L	Washer	M16235																																																		
23	MS21042L3 ✓	Nut (or -3)	M19690																																																		
4	MS24693-S272	Screw	M10248																																																		
4	MS27039-1-17	Screw	M11540																																																		
12	MS27039-1-19	Screw	M11573																																																		
33	QC5	Inspect work to Step 32	J	06-02-21	1																																																
34	KP	Go back to D350-689-011 ready for packing	CL	06/02/23	1																																																

Rev	Date	Change	Revised By	Approved
A	01.05.29	New issue	EC	
B	01.10.24	Changed bolt	EC	
C	01.11.09	Revised Step 6, Added Inspection Level 21 and Drawings	SM	
D	01.12.21	Added Step 4	SM	
E	02.01.22	Combined D3016-041, D3021-041, D3017-041 and revised the process.	NG	
F	03.05.07	Reformat	KJ/RF	
G	05.06.20	Added Powder Coat	KJ/JLM	

06-02-23  
**RELEASED**  
 05-06-20

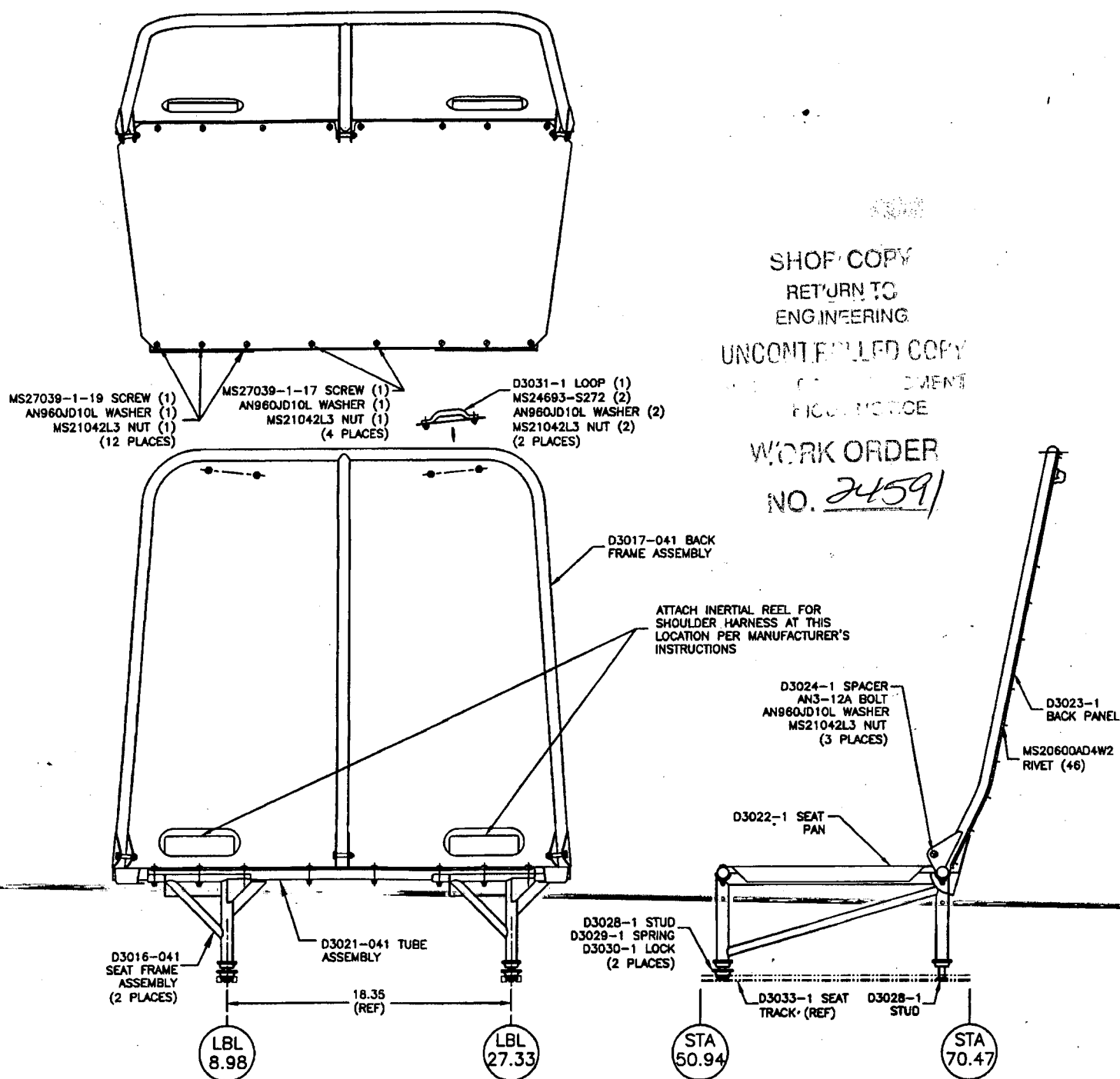
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Mfg / Design Mgr	Approval QC Inspector

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Design Mgr	Approval QC Inspector
			Initial Design Mgr	Action Description Design Mgr	Sign & Date			

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

NOTE: Date & initial all entries

QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_



SHOP COPY  
RETURN TO  
ENGINEERING  
UNCONTROLLED COPY  
WORK ORDER  
NO. 24591

FIGURE 6: Installation of D350-689-041 Dual High Back Seat Assembly

• COPYRIGHT © 2001 BY DART AEROSPACE LTD. •  
THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.

Revision: **A**  
Date: 01.05.30



DESIGN <i>CP</i>	DRAWN BY <i>CP</i>	<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>#</i>	APPROVED <i>#</i>	DRAWING NO. D3016	REV. A SHEET 1 OF 3
DATE 01.05.18		TITLE SEAT FRAME ASSEMBLY	SCALE NTS
A	01.05.18	NEW ISSUE	

QTY	PART NUMBER	DESCRIPTION	MATERIAL
X	D3016-041	SEAT FRAME ASSEMBLY	N/A
1	D3016-1	TUBE	AISI 4130N TUBE, Ø0.75 DIA x 0.049 WALL (M4130N-T0750W049)
2	D3016-3	TUBE	AISI 4130N TUBE, Ø0.75 DIA x 0.049 WALL (M4130N-T0750W049)
1	D3016-5	TUBE	AISI 4130N TUBE, Ø0.50 DIA x 0.049 WALL (M4130N-T0500W049)
2	D3016-7	TUBE	AISI 4130N TUBE, Ø0.50 DIA x 0.049 WALL (M4130N-T0500W049)
1	D3016-9	SADDLE	AISI 4130N TUBE, Ø1.00 DIA x 0.120 WALL (M4130N-T1000W120)
1	D3016-11	SADDLE	AISI 4130N TUBE, Ø1.00 DIA x 0.120 WALL (M4130N-T1000W120)
1	D3016-13	BRACKET	AISI 4130N SHEET, 18 GAUGE (M4130N-S049)
1	D3016-15	GUSSET	AISI 4130N SHEET, 18 GAUGE (M4130N-S049)
1	D3016-17	GUSSET	AISI 4130N SHEET, 18 GAUGE (M4130N-S049)
2	D3020-1	FITTING	N/A

#### NOTES

- 1) WELD PER DART QSI 004
- 2) ON SHEET METAL PARTS, BREAK ALL UNMARKED CORNERS 0.020-0.040
- 3) FINISH: POWDER COAT GREY SANDTEX (REF. 4.3.5.6) PER DART QSI 005 4.3
- 4) ALL DIMENSIONS ARE IN INCHES
- 5) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED

OF COPY

RETURN TO  
ENGINEERING

IF LOST COPY

FOR AMENDMENT  
FOR NOTICE

ORDER

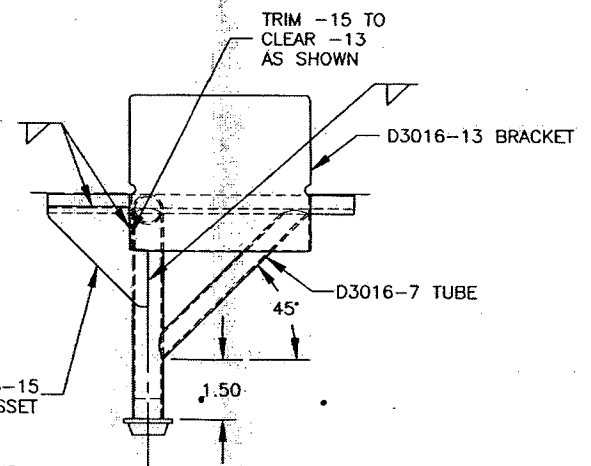
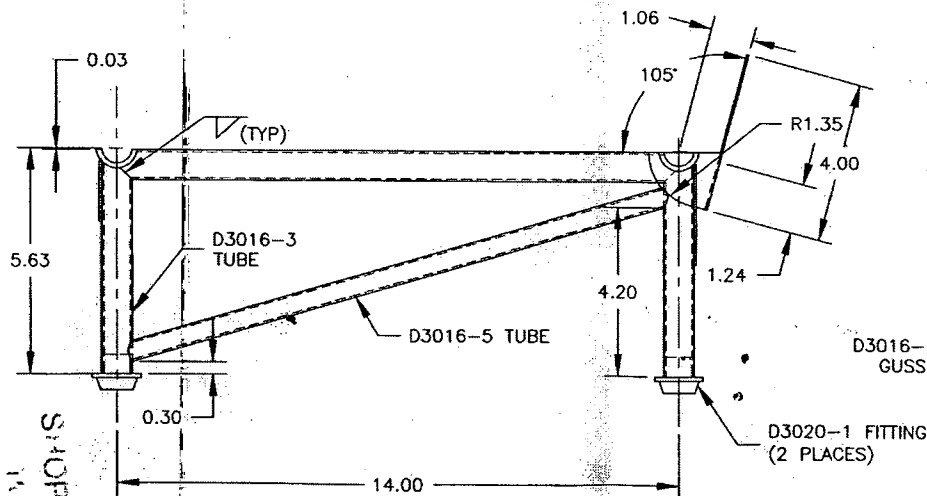
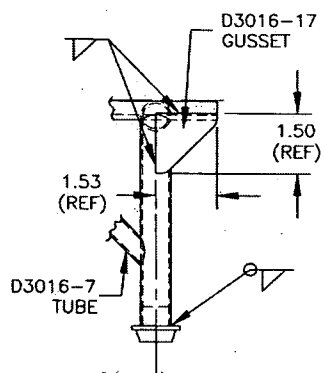
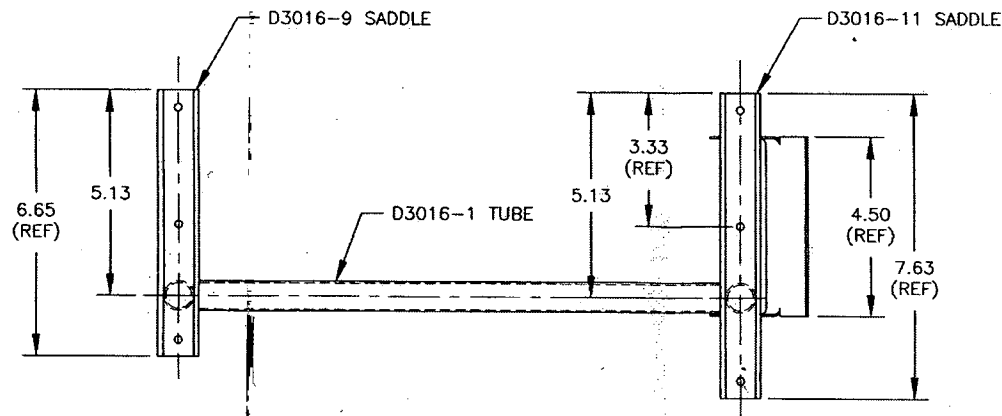
NO. 24591

RELEASED  
01-05-30

Copyright © 2001 by DART AEROSPACE LTD

THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.

# D3016-041 SEAT FRAME ASSEMBLY



RELEASED  
01.05.18

COPYRIGHT © 2001 BY DART AEROSPACE LTD.

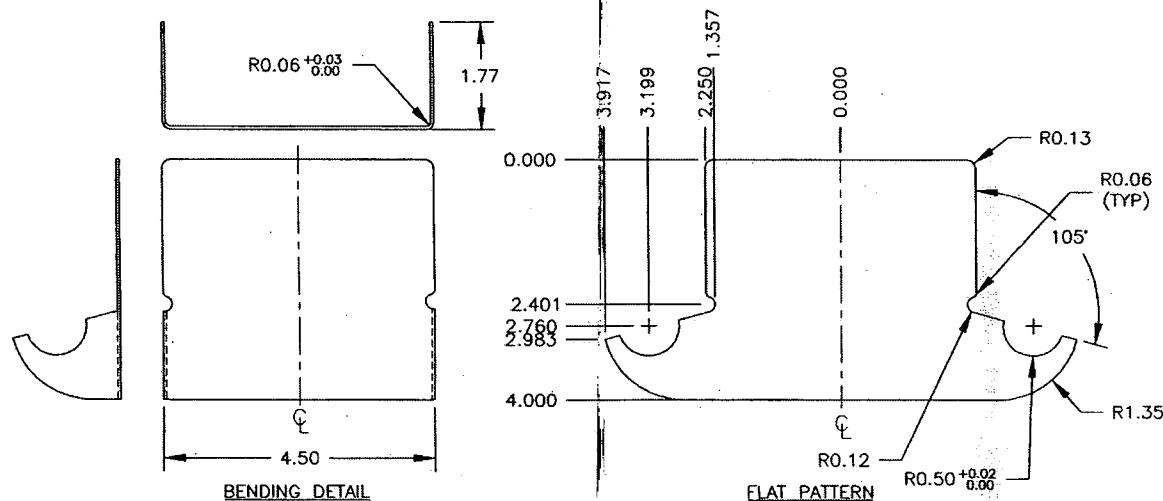
THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.

DESIGN	CP	DRAWN BY	CP	<b>DART</b>	DART AEROSPACE LTD. MARKESBURY, ONTARIO, CANADA
CHECKED	#	APPROVED	#	DRAWING NO. D3016	REV. A
DATE	01.05.18	TITLE	SEAT FRAME ASSEMBLY	SHEET 2 OF 3	SCALE

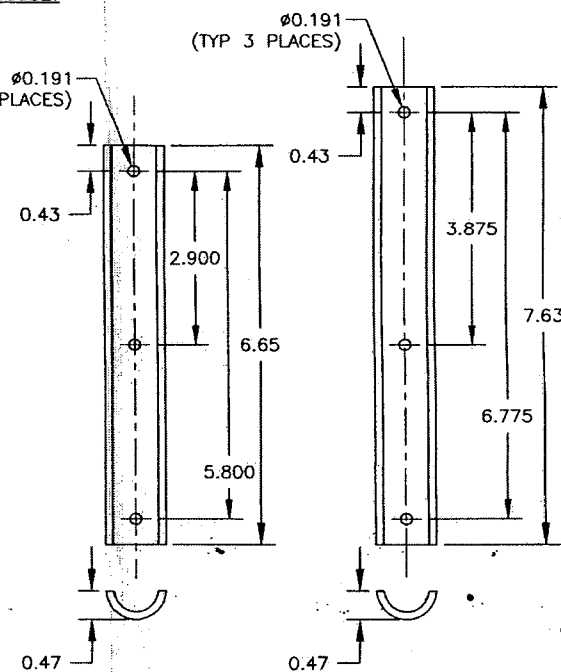
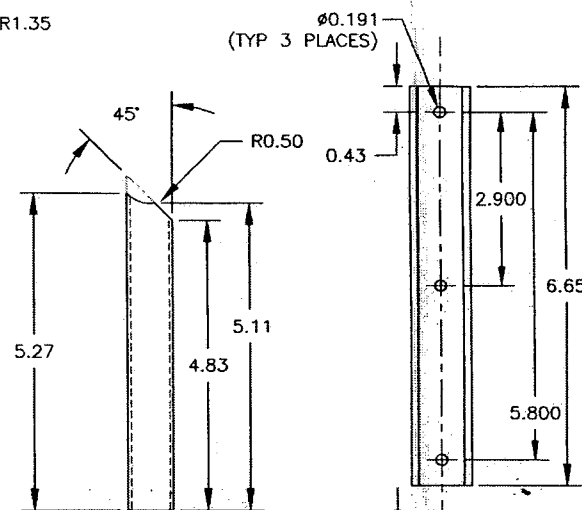
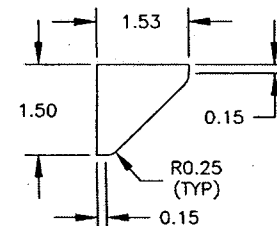
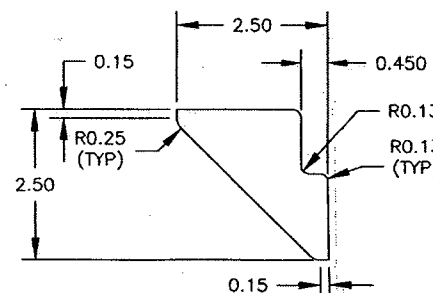
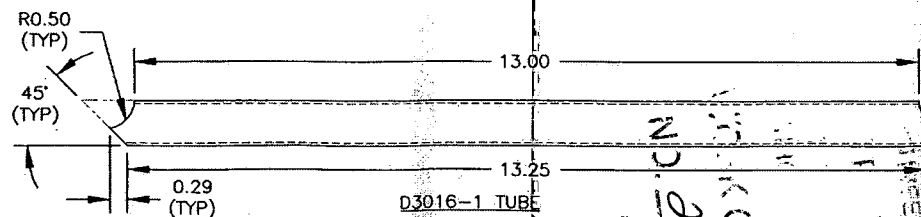
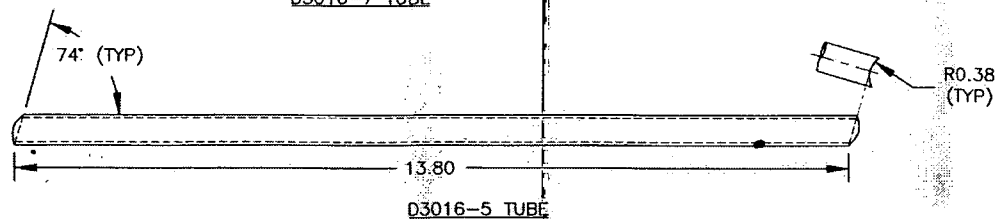
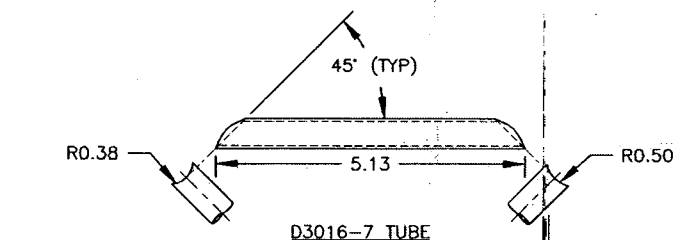
SHOP COPY  
TURN TO  
DRAWING  
IT COPY  
T1 COMMENT  
CUT NOTICE

ORDER

24591



D3016-13 BRACKET



D3016-11 SADDLE  
RELEASED  
9.05.30

COPYRIGHT © 2001 BY DART AEROSPACE LTD.		DESIGN	DRAWN BY	<b>DART</b>	DART AEROSPACE LTD. MARKHAM, ONTARIO, CANADA
THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.		CHECKED	APPROVED		
DATE		01.05.18		DRAWING NO.	REV. A
				D3016	SHEET 3 OF 3
				TITLE	SCALE
				SEAT FRAME ASSEMBLY	1:2

201  
24591  
ORDER

10P COPY  
MENT  
OFFICE

**DART**

DESIGN <i>CP</i>	DRAWN BY <i>CP</i>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>#</i>	APPROVED <i>#</i>	DRAWING NO. D3017	REV. A SHEET 1 OF 2
DATE 01.05.18		TITLE BACK FRAME ASSEMBLY	SCALE 1:1
A	01.05.18	NEW ISSUE	

QTY	PART No.	DESCRIPTION	MATERIAL
X	D3017-041	BACK FRAME ASSEMBLY	N/A
1	D3017-1	TUBE	AISI 4130N TUBE, Ø0.75 DIA x 0.049 WALL (M4130N-T0750W049)
2	D3017-3	TUBE	AISI 4130N TUBE, Ø0.75 DIA x 0.049 WALL (M4130N-T0750W049)
1	D3017-5	TUBE	AISI 4130N TUBE, Ø0.75 DIA x 0.049 WALL (M4130N-T0750W049)
3	D3017-7	LUG	AISI 4130N SHEET, 18 GAUGE (M4130N-S049)
2	D3017-11	END CAP	AISI 4130N SHEET, 18 GAUGE (M4130N-S049)

**NOTES**

- 1) WELD PER DART QSI 004
- 2) ON SHEET METAL PARTS, BREAK ALL UNMARKED CORNERS 0.020-0.040
- 3) FINISH: POWDER COAT GREY SANDTEX (REF. 4.3.5.6) PER DART QSI 005 4.3
- 4) ALL DIMENSIONS ARE IN INCHES.
- 5) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED.

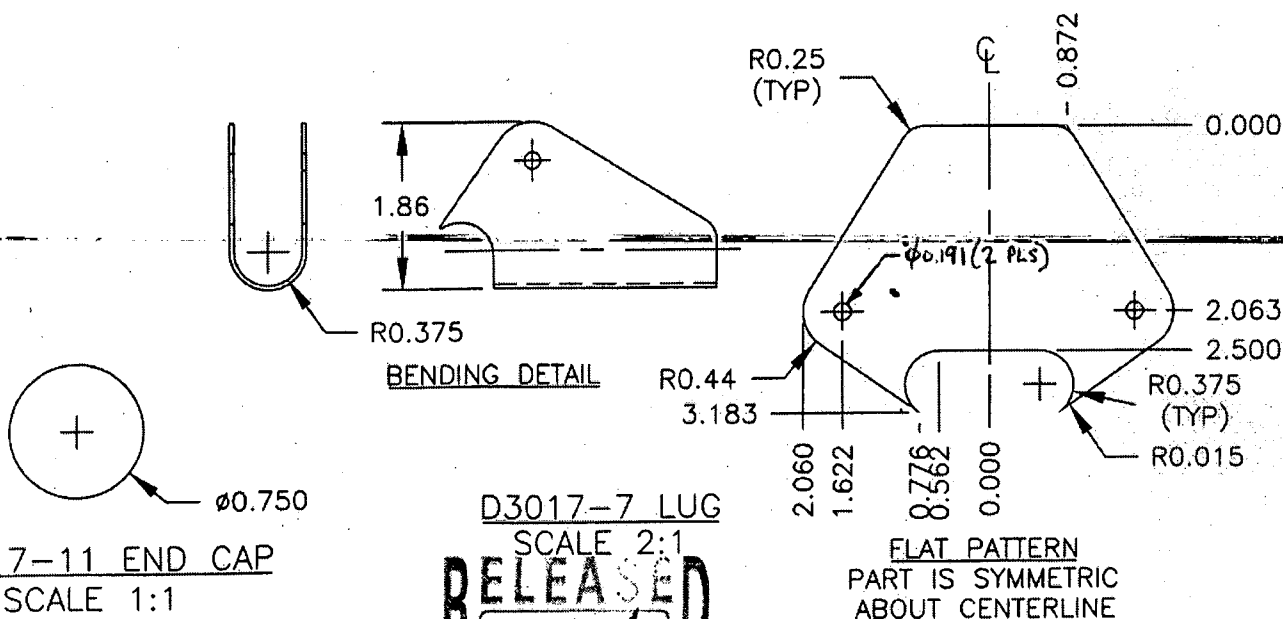
RETURN TO  
ENGINEERING

CONTROLLED COPY

AMENDMENT  
NOTICE

DER

24591



Copyright © 2001 by DART AEROSPACE LTD

THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.

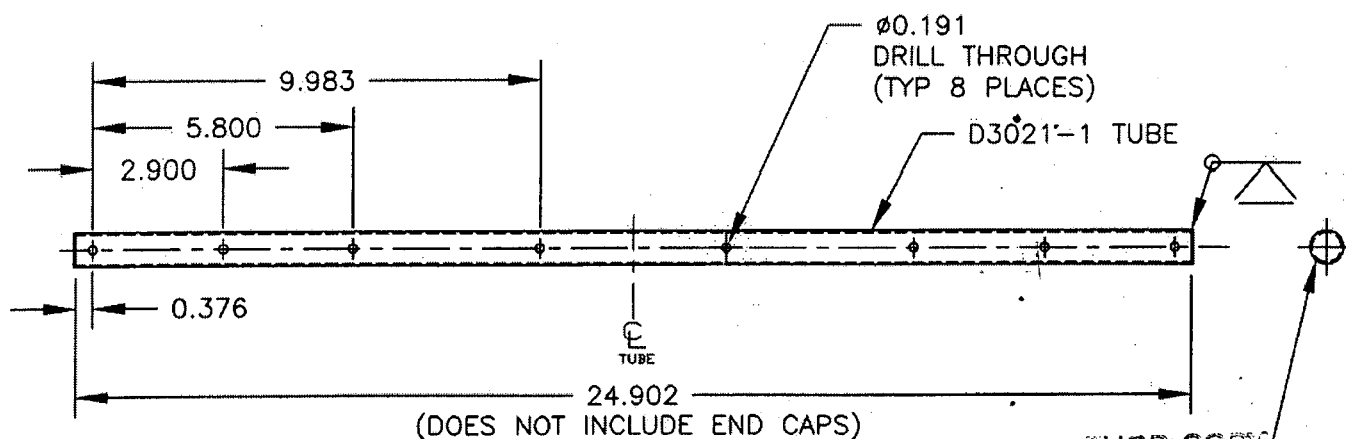






**DART**

DESIGN <i>CP</i>	DRAWN BY <i>CP</i>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>#</i>	APPROVED <i>#</i>	DRAWING NO. D3021	REV. A SHEET 1 OF 1
DATE 01.05.18		TITLE TUBE ASSEMBLY	SCALE 1:4
A	01.05.18	NEW ISSUE	



D3021-041 TUBE ASSEMBLY  
(D3021-1 TUBE)

WORK ORDER  
NO. 24591

**NOTES:**

- 1) PART IS SYMMETRIC ABOUT CENTERLINE
- 2) MATERIAL: AISI 4130 TUBE,  $\phi 0.75$  DIA x 0.049 WALL (M4130N-T0750W049)
- 3) WELD PER DART QSI 004
- 4) FINISH: POWDER COAT GREY SANDTEX (REF 4.3.5.6) PER DART QSI 005 4.3
- 5) ALL DIMENSIONS ARE IN INCHES
- 6) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED.

**RELEASED**  
01.05.30

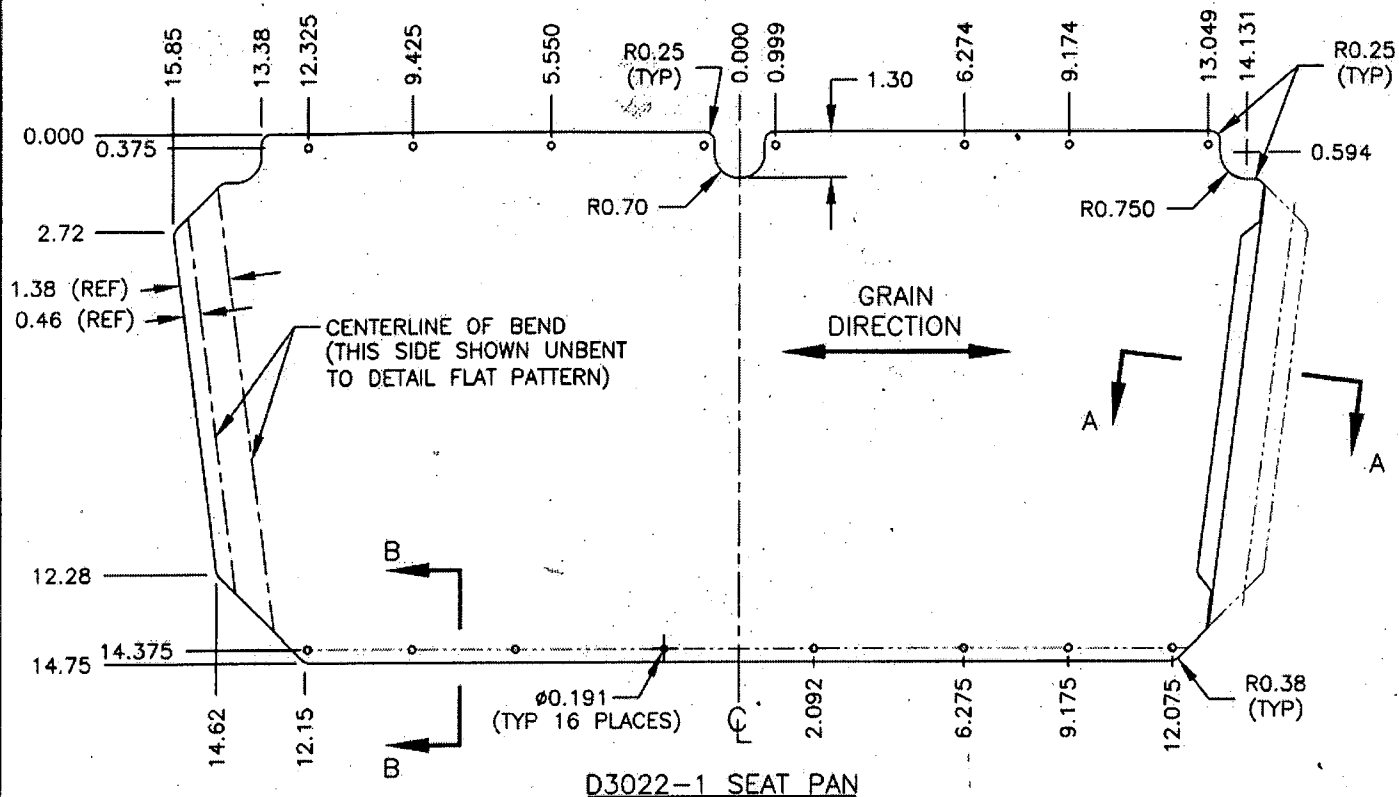
Copyright © 2001 by DART AEROSPACE LTD

THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.

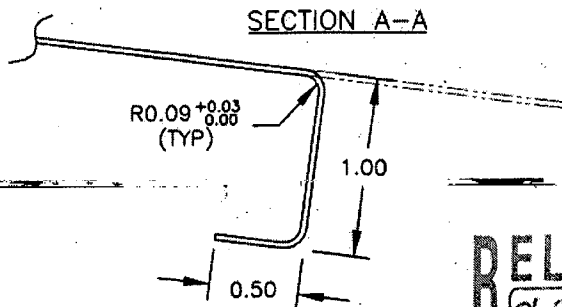


**DART**

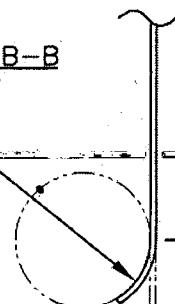
DESIGN CP	DRAWN BY CP	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED JH	APPROVED JH	DRAWING NO. D3022	REV. A SHEET 1 OF 1
DATE 01.05.18		TITLE SEAT PAN	SCALE 1:5
A	01.05.18	NEW ISSUE	



## SECTION A-A



## SECTION B-B

R0.38  
ONE EDGE ONLY**RELEASED**  
02.07.18

## NOTES:

- 1) SHAPE IS SYMMETRIC ABOUT CENTERLINE, HOLE PATTERN IS NOT
- 2) MATERIAL: 2024-T3 (QQ-A-250/4) 0.032 THICK
- 3) FINISH: ACID ETCH & ALODINE PER DART QSI 005 4.1  
POWDER COAT GREY SANDTEX (REF 4.3.5.6) PER DART QSI 005 4.3
- 4) ALL DIMENSIONS ARE IN INCHES
- 5) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED.

WORK ORDER

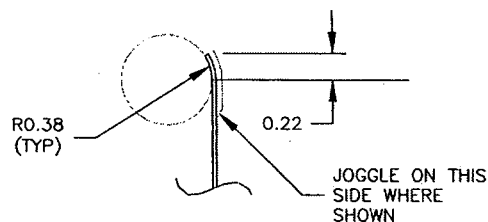
NO. 24591

Copyright © 2001 by DART AEROSPACE LTD

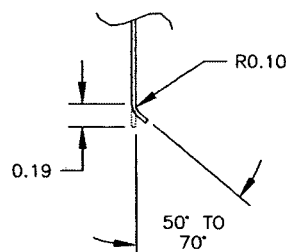
THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.



SECTION A-A  
SCALE 1:1  
(TYPICAL, EXCEPT WHERE SHOWN)



SECTION B-B  
SCALE 1:1  
(BOTTOM EDGE ONLY)

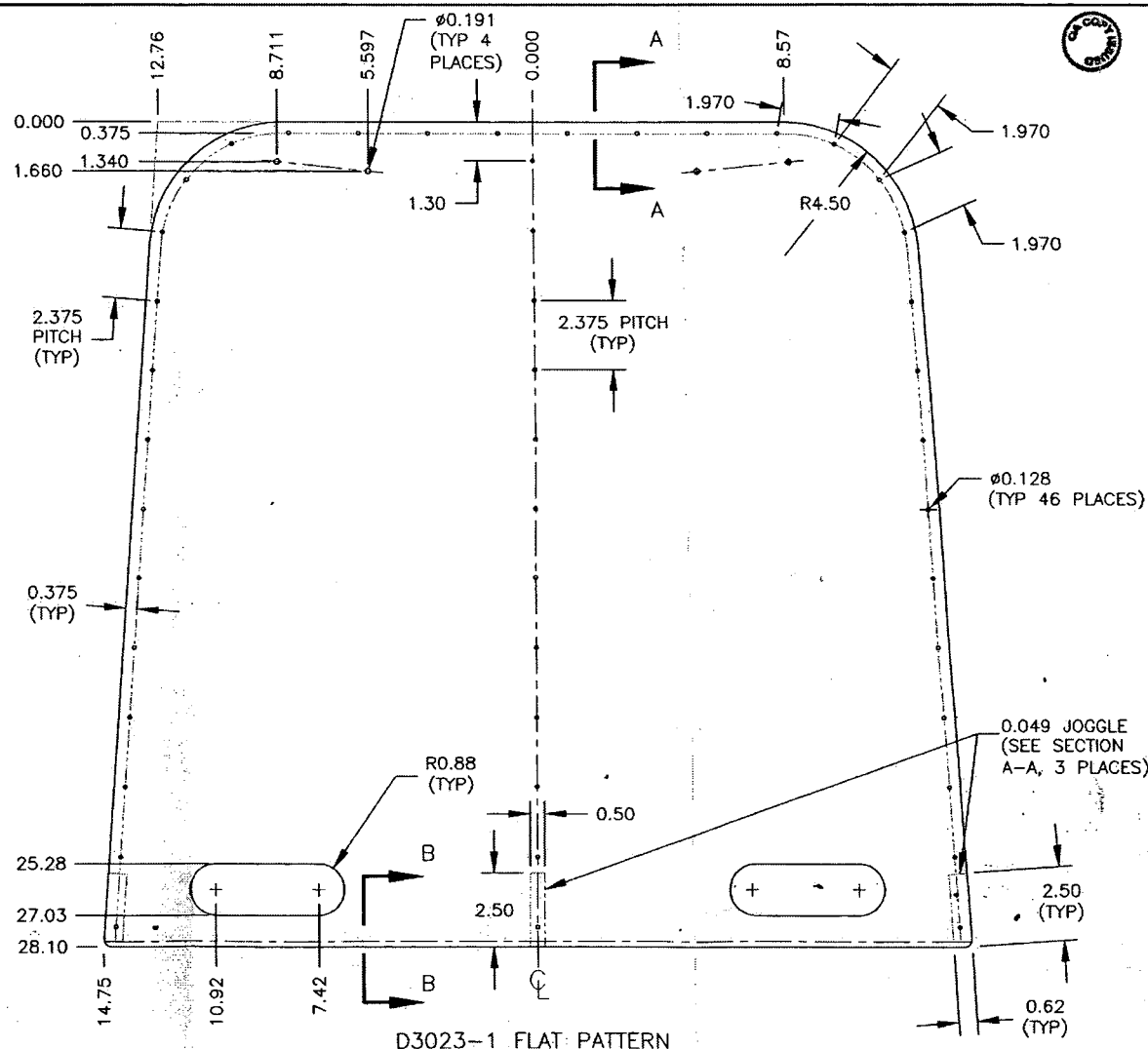


RELEASED  
9.06.07

WORK OFFSET  
NO. 24591

SUBJECT TO  
UNCONTROLLED  
REVISIONS  
ENGINEER

D3023-1 BEND DETAIL



D3023-1 FLAT PATTERN

D3023-1 BACK PANEL:

- 1) MATERIAL: 2024-T3 (QQ-A-250/4) 0.032 THICK
- 2) FINISH: ACID ETCH & ALODINE PER DART QSI 005 4.1  
POWDER COAT GREY SANDTEX (REF 4.3.5.6) PER DART QSI 005 4.3
- 3) ALL DIMENSIONS ARE IN INCHES.
- 4) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED.

COPYRIGHT © 2001 BY DART AEROSPACE LTD.

THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL  
AND IS SUPPLIED ON THE EXPRESS CONDITION  
THAT IT IS NOT TO BE USED FOR ANY PURPOSE  
OR COPIED OR COMMUNICATED TO ANY OTHER  
PERSON WITHOUT WRITTEN PERMISSION FROM  
DART AEROSPACE LTD.

A	01.05.18	NEW ISSUE
DESIGN	CP	DART DART AEROSPACE LTD. HAMPSHIRE, ENGLAND, CANADA
CHECKED	APPROVED	DRAWING NO. D3023
DATE	01.05.18	TITLE BACK PANEL
		REV. A SHEET 1 OF 1 SCALE 1:4